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BALTIMORE, DECEMBER 29, 1910.

A NEW YEAR THOUGHT.

May the New Year bring you much joy. May it bring you peace and prosperity. May its incoming and all its days unto its outgoing be marked by blessings so many that through all life the remembrance of it will awaken gratitude for 1911 to the "Giver of every good and perfect gift." Is the wish of the MANUFACTURERS RECORD.

THE SOUTH'S DEFENCE.

Request of a correspondent, similar to requests which we frequently receive, that we criticise a recent work which he thinks misrepresents the South, has led us to writing:

We appreciate your suggestion that we should undertake to criticise the work. In the past 28 years we have aimed to combat every statement likely to affect seriously the welfare of the South, but in order to meet every adverse criticism it would be necessary to have a paper published 365 days in the year devoted exclusively to such work. Moreover, one of the troubles today with the South is that in the past 19 years an element has come to the front assuming to represent the South, and not only backing up actively or passively misrepresentations of Southern conditions, but producing a few individuals spending their energies upon efforts to cripple the influence of publications and men who would save the South from such an element.

A lie is fleet-footed than any truth that chases it. Liars may be depended upon to trip over their own inventions. The blackguard is most artistic in painting his own portrait. Therefore, the philosophic South must content itself with uttering warnings from time to time against the men that would

misdo it, and must demonstrate by its accomplishments their unreliability, knowing full well that in the meantime it must, to paraphrase Rudyard Kipling—

hear the truth that's spoken
Twisted by knaves to make a trap for fools.

"EXTRAVAGANT WITH TIME."

In one of the letters from cotton mill officials published in last week's issue of the MANUFACTURERS RECORD in regard to the conditions of the cotton goods trade there was a striking statement from Mr. J. W. Hawke, secretary of the Coosa Mfg. Co. of Piedmont, Ala., in which, referring to the penalties that we are paying for many national tendencies in labor employment and other things, he says:

We can be as extravagant with time as we have the reputation of being with money.

What we need is good old-fashioned business sense, and stop this pampering to shorter and shorter hours and curtailment of production. Go out and get the world's business and stop playing politics and get away from the idea that we can prosper by simply trading with ourselves.

Mr. Hawke is right in the statement that we have been extravagant with time as well as with money. We have encouraged in the press, in schools and on the platform the idea of less and less work. We have shortened the hours of labor and lessened the efficiency of the laborer until the cost of production of all kinds has steadily tended upward. It is no longer a question with the majority of people as to how much work and how good a job I can do. On the contrary, the question is, How little can I do and yet retain my position? The burden of this falls upon every individual. The man who, by his own lack of efficiency and his struggle to lessen the amount of his labor helps add to the cost of all production, is paying the penalty in an unnecessary cost of living. He adds to the cost of the house in which he lives, to the cost of the food he consumes, to the cost of the clothes he wears. Our whole struggle has for years been—and politicians have vied with each other—to shorten the hours of labor to such an extent that throughout every phase of business activity the country is suffering from too much politics and too little business sense. We have been cursed by such policies, taught in schools to the detriment of the young, heralded in the newspapers, made the basis of political agitation and proclaimed from the lecture platform. We have, indeed, as Mr. Hawke says, been extravagant with time as well as with money, and we are paying the penalty.

NEW ENGLAND BANKERS FAVOR NEW ORLEANS.

Moody Brothers & Co., bankers of Springfield, Mass., are very earnest in their efforts to interest their correspondents everywhere in New Orleans being selected as the site for the proposed Panama Exposition. In a letter to the MANUFACTURERS RECORD reference

is made to this matter, and in it they say:

The time is so short that no time should be lost in pressing the claims both before the public and with our Representatives.

What are the people of the whole South doing in this campaign? How vigorously are they working to co-operate with New Orleans?

SOUTHERN FARM CROPS.

Seven staple crops, common to the whole country, yielded in 1910 in the South \$874,302,443. The same crops—corn, wheat, tobacco, hay, oats, Irish potatoes and rye—yielded in 1900 in the South \$427,444,000. In the first decade of the century their value has increased at the rate of 104.5 per cent. in the South, and at the rate of 55.3 per cent. in the rest of the country.

These seven crops, with rice and products of the sugar cane, have an aggregate value of quite \$925,000,000, which suggests that cotton, approaching with its seed a value this year of \$1,000,000,000, is by no means the only great crop of the South. Thus, the South is, by the very results it is accomplishing, giving itself the widest and the most effective sort of advertisement of its opportunities for the thrifty home-builder in agriculture.

Its accomplishments this year are especially notable in comparison with last year, as in the following table:

Crops.	1909.	1910.
Corn.....	\$557,806,000	\$587,657,000
Wheat.....	71,431,000	87,971,000
Tobacco.....	72,679,995	69,106,443
Hay.....	61,473,000	67,139,000
Oats.....	32,576,000	36,270,000
Irish potatoes.....	24,496,000	24,758,000
Rye.....	1,214,000	1,401,000
Total.....	\$821,726,095	\$874,302,443

In every one of the seven crops, save tobacco, there was an increase in value in the South in 1910 over 1909, and in every one there was an increase in quantity. The aggregate increase was from \$821,726,000 to \$874,302,000, or by \$52,576,000, equal to 6.4 per cent., while in the rest of the country there was a decrease of 9 per cent., from \$2,984,794,000 to \$2,706,878,000, or by \$277,856,000.

The favorable showing of the South is emphasized in a comparison of 1900 and 1910 in the following table:

Crops.	1900.	1910.
Corn.....	\$234,648,000	\$587,657,000
Wheat.....	68,205,000	87,971,000
Tobacco.....	40,193,000	69,106,443
Hay.....	42,466,000	67,139,000
Oats.....	30,371,000	36,270,000
Irish potatoes.....	10,254,000	24,758,000
Rye.....	1,307,000	1,401,000
Total.....	\$427,444,000	\$874,302,443

Between 1900 and 1910 the value of these crops in the rest of the country increased from \$1,460,005,000 to \$2,706,878,000, or by \$1,246,273,000, equal to 85.3 per cent., and in the South from \$427,444,000 to \$874,302,000, or by \$446,858,000, equal to 104.5 per cent. The great increase came in corn, from \$234,648,000 to \$587,657,000, or by \$353,009,000, equal to 150.4 per cent., though Irish potatoes, more than doubling in value, have approached the value of the sweet potato crop, in which the South is a leader, and there have been quite

satisfactory increases in wheat and hay.

Figures of values are always impressive when they run up into the millions. But they are not necessarily, except indirectly, a true measure of actual productivity. Even a comparison of quantities, however, makes the showing of the South this year significant. In the accompanying tables are given both quantities and values by States in 1910.

In corn, a record-making crop generally, there was an increase in the South of about 177,000,000 bushels in 1910 over 1909, and that was half of the increase in the whole country. Every Southern State had an increase, except West Vir-

Corn.

	Bushels.	Value.
Alabama.....	63,432,000	\$45,067,000
Arkansas.....	69,216,000	49,145,000
Florida.....	8,814,000	7,492,000
Georgia.....	65,714,000	51,257,000
Kentucky.....	165,270,000	55,793,000
Louisiana.....	58,835,000	32,359,000
Maryland.....	23,785,000	13,795,000
Mississippi.....	66,256,000	41,741,000
North Carolina.....	57,139,000	43,426,000
South Carolina.....	44,733,000	36,681,000
Tennessee.....	96,548,000	53,955,000
Texas.....	181,290,000	114,296,000
Virginia.....	54,621,000	35,504,000
West Virginia.....	23,920,000	16,266,000
Total.....	919,363,000	\$587,657,000
United States.....	3,125,713,000	1,523,968,000

ginia, marking a recovery from the drought of the preceding year. There was an increase of nearly 60,000,000 in the Texas crop, and nearly 26,000,000 in Mississippi and 20,000,000 in Alabama. Even with its production of 181,000,000 bushels, Texas did not equal its crop of more than 200,000,000 bushels in 1908, but through all the South the steady advance in the aggregate made during the past ten or twelve years is a sign of persistence in the policy of diversification, necessary in the time of starvation prices for cotton in the last decade of the nineteenth century, and reviving the better-balanced farming that prevailed in so many parts of the South fifty years ago.

The record in wheat is especially satisfactory. Spring wheat, which is not grown in the South, fell off 62,000,000 bushels in 1910, and the total wheat

Wheat.

	Bushels.	Value.
Alabama.....	1,569,000	\$1,763,000
Arkansas.....	2,710,000	2,547,000
Georgia.....	2,739,000	3,519,000
Kentucky.....	9,890,000	8,928,000
Maryland.....	13,816,000	12,711,000
Mississippi.....	70,000	81,000
North Carolina.....	7,433,000	8,176,000
South Carolina.....	4,983,000	6,279,000
Tennessee.....	10,647,000	10,434,000
Texas.....	18,780,000	18,404,000
Virginia.....	10,176,000	9,871,000
West Virginia.....	5,125,000	5,228,000
Total.....	87,630,000	\$87,971,000
United States.....	695,443,000	621,443,000

crop in the country outside the South fell off 68,800,000 bushels, or at the rate of nearly 11 per cent., while the Southern crop increased by 27,000,000 bushels, or at the rate of 44.8 per cent. Nearly half the increase was in Texas, though every State showed a gain, and South Carolina, which gained nearly 900,000 bushels in 1909 over 1908, made a further gain in 1910 of 1,173,000 bushels, other increases being, in round numbers, Alabama, 531,000 bushels; Arkansas, 989,000; Georgia, 280,000; Kentucky, 1,694,000; Maryland, 2,651,000; North Carolina, 2,018,000; Tennessee, 2,327,000; Virginia, 1,328,000 and West

Virginia, 314,000 bushels, while the increase of 59,000 bushels in Mississippi marked a rate of increase of 536 per cent.

The decrease in the aggregate value of the tobacco crop by \$3,500,000 was in spite of an increase of 19,500,000 pounds

Tobacco.		
	Pounds.	Value.
Alabama.....	200,000	\$60,000
Arkansas.....	585,000	93,600
Florida.....	2,380,000	547,400
Georgia.....	1,088,000	217,600
Kentucky.....	381,024,000	33,149,088
Louisiana.....	275,000	68,750
Maryland.....	19,665,000	1,514,205
Mississippi.....	55,000	11,000
North Carolina.....	129,600,000	13,737,600
South Carolina.....	18,900,000	1,625,400
Tennessee.....	64,000,000	5,426,400
Texas.....	420,000	105,000
Virginia.....	124,800,000	11,232,000
West Virginia.....	12,800,000	1,318,400
Total.....	756,492,000	\$69,106,443
United States.....	984,349,000	91,458,773

in production. There were increases in quantity of 1,915,000 pounds in Maryland, 30,300,000 in Kentucky, 11,400,000 pounds in Tennessee and 4,700,000 pounds in Virginia, with slight gains in Arkansas, Louisiana, Mississippi and West Virginia. But the decreases of 14,400,000 pounds in North Carolina and of 13,100,000 pounds in South Carolina, with losses in Alabama, Florida, Georgia and Texas, affected the general total.

The country's hay crop declined by 3,960,000 tons in 1910, but in the South there was an increase of 139,000 tons,

Hay.		
	Tons.	Value.
Alabama.....	172,000	\$2,270,000
Arkansas.....	284,000	3,124,000
Florida.....	25,000	425,000
Georgia.....	122,000	2,001,000
Kentucky.....	645,000	8,450,000
Louisiana.....	44,000	596,000
Maryland.....	393,000	6,062,000
Mississippi.....	142,000	1,732,000
North Carolina.....	262,000	3,825,000
South Carolina.....	84,000	1,344,000
Tennessee.....	637,000	8,536,000
Texas.....	711,000	8,532,000
Virginia.....	565,000	8,192,000
West Virginia.....	810,000	12,150,000
Total.....	4,896,000	\$67,139,000
United States.....	60,978,000	747,769,000

every State, except Florida, Kentucky, Tennessee, Virginia and West Virginia, showing an increase, and that, too, in the face of the lack of necessity in so many parts of the South to lay by a forage crop of the kind for winter.

So, also, with a decrease of 37,700,000 bushels in the Irish potato crop of the country, the South increased its produc-

Irish Potatoes.		
	Bushels.	Value.
Alabama.....	1,440,000	\$1,354,000
Arkansas.....	2,604,000	2,213,000
Florida.....	540,000	540,000
Georgia.....	820,000	861,000
Kentucky.....	3,772,000	2,339,000
Louisiana.....	1,100,000	990,000
Maryland.....	3,420,000	1,847,000
Mississippi.....	765,000	719,000
North Carolina.....	2,314,000	1,689,000
South Carolina.....	900,000	945,000
Tennessee.....	2,400,000	1,560,000
Texas.....	3,060,000	3,366,000
Virginia.....	6,566,000	3,808,000
West Virginia.....	3,772,000	2,527,000
Total.....	33,473,000	\$24,758,000
United States.....	338,811,000	187,985,000

tion in 1910 by 2,800,000 bushels. In the first year of the century the South raised about 8 per cent. of the Irish potato crop of the country; this year its share was nearly 10 per cent. of the total.

Oats and rye are hardly Southern crops. Yet, this year the South shared

Oats.		
	Bushels.	Value.
Alabama.....	5,494,000	\$3,296,000
Arkansas.....	4,730,000	2,176,000
Florida.....	502,000	326,000
Georgia.....	6,243,000	3,996,000
Kentucky.....	4,250,000	1,912,000
Louisiana.....	774,000	379,000
Maryland.....	810,000	373,000
Mississippi.....	3,360,000	1,848,000
North Carolina.....	3,458,000	2,075,000
South Carolina.....	4,599,000	2,989,000
Tennessee.....	4,600,000	2,116,000
Texas.....	24,325,000	11,433,000
Virginia.....	4,268,000	2,091,000
West Virginia.....	2,520,000	1,260,000
Total.....	69,933,000	\$36,270,000
United States.....	1,126,765,000	384,716,000

in the general increase in production of these two crops, Texas leading in oats in the South, with 24,325,000 of the total

69,933,000 bushels, and Maryland leading in rye, with 338,000 of the total

Rye.		
	Bushels.	Value.
Alabama.....	88,000	\$81,000
Arkansas.....	24,000	24,000
Georgia.....	146,000	204,000
Kentucky.....	160,000	144,000
Maryland.....	338,000	254,000
North Carolina.....	150,000	152,000
South Carolina.....	40,000	58,000
Tennessee.....	88,000	81,000
Texas.....	46,000	47,000
Virginia.....	270,000	216,000
West Virginia.....	155,000	140,000
Total.....	1,505,000	\$1,401,000
United States.....	33,039,000	23,840,000

1,505,000 bushels.

Discussion of grain crops in the South must include a reference to rice. The crop this year is larger by 142,000 bushels than last year's crop, but the price is lower, and the aggregate value is \$2,723,000 less. This is, of course, only one of the vicissitudes of any crop, and rice-growing is bound to expand and to be more and more profitable. What has been done in recent years appears in the following comparison of production in bushels in 1904 and 1910, by States:

States.	1904.	1910.
Alabama.....	68,069	25,000
Arkansas.....	2,400,000
Florida.....	103,788	19,000
Georgia.....	234,000	88,000
Louisiana.....	11,445,000	12,769,000
Mississippi.....	39,681	84,000
North Carolina.....	58,320	27,000
South Carolina.....	832,500	357,000
Texas.....	8,314,100	8,738,000
Total.....	21,096,038	24,507,000

These figures tell of the continued development of rice-growing in the southwestern part of the South, and the 2,400,000 bushels raised in Arkansas, where ten years ago the crop was not treated statistically, is but a sign of the general trend and a revelation of the possibilities in the crop.

With crops already having an aggregate annual value of between \$2,500,000,000 and \$3,000,000,000, and with a hundred million acres awaiting the skillful husbandman, the advancement of the South on agricultural lines is simply a matter of getting the best kind of men to do the best kind of work. This year's crops tell them what they can do.

"POWERFUL ADVERSE INFLUENCES."

In republishing from the MANUFACTURERS RECORD of December 15th the statistics showing the lessening rate of growth in Southern population and the causes which have contributed to this, the *Daily Picayune* of New Orleans adds:

That there have been powerful adverse influences operating throughout the country against the South is beyond question. But in all probability they have not brought us evil wholly and entirely. It is possible that much of the foreign immigration which has been diverted from our section will operate to our benefit. The crowding of the North from Russia and the South of Europe will induce a steady flow of desirable population from the North, and if our section should fail to fill up with people as rapidly as it might otherwise have done, our development will be more certain and solid. We have the richest natural resources in the world, and they are bound to attract all the attention they deserve and place our section at the head of the nation for the wealth and power it gives.

The *Picayune* makes the mistake so generally made in not understanding that the very effort of the influences which have been at work militating against the South, and which the *Picayune* refers to as "powerful adverse influences," are very much more interested in dumping on the South foreign immigration than in seeing this section benefited by an influx of desirable population from the North. The fight of the MANUFACTURERS RECORD has been against these "powerful adverse influences," in order to save the South

from being made the dumping ground of the undesirable foreigners who, congesting, as they have done in New York, are proving a great burden to that city. Influences at work emanating from New York and elsewhere are constantly seeking to mislead the South. If, whether so intended or not, the various propagandas against the best interests of the South should succeed in keeping the people of the North and West from coming into this section, there will eventually be developed a desire in the South to get any kind of immigration, even at the risk of the kind that has added so fearfully to the conditions of the East Side of New York. If these "adverse influences" can only hoodwink the South long enough, so that it will see its population decreasing by the emigration of its own people and the failure to attract the better class of settlers elsewhere, their work will have been accomplished, for they will then have this section in a condition where it will be willing to accept any kind of immigration that can be had. The *Picayune*, like a great many other papers, has not understood the situation.

DRUM VS. BRASS IN SOUTHERN ADVERTISEMENT.

Mr. C. B. Waterloo of Port Huron, Mich., discussing our recent editorials dealing with the comparatively small showing made by the South as to increase in population during the past ten years, writes:

I would like to offer the following reason or reasons which I think have a great bearing on the matter. It is not that people do not like the South by any means, but simply because of counter attractions, viz., the great movement to the Northwestern States, Oregon, Washington and Idaho, and also to the Canadian Northwest, which has taken the bulk of the moving classes. This great movement in that direction has been in the nature of a boom, which we see here in the North more than you do in the South. The great Canadian Northwest has simply taken thousands from Michigan, Ohio, Indiana, Illinois, Wisconsin, Iowa, Minnesota and the Dakotas. We up here see it, and I take an interest in these matters. I fully believe this to be the principal reason for this loss to the South. However, I do believe this big boom is easing off up that way and that from now on the South will get her share of this migration. They certainly have been pounding a bigger drum. This costs you nothing, but there is a lot in it. What think you?

Granted that the Pacific Coast States and the Canadian Northwest have attracted population from the States mentioned by Mr. Waterloo, it is, nevertheless, a fact that the rate of increase in four Southern States was less than the rate in Wisconsin; in five Southern States less than the rate in Ohio; in seven Southern States less than the rate in Illinois, and in nine Southern States less than the rate in Minnesota, a State lying jam-up against the Canadian Northwest, and that the average rate for the whole South declined from 20.1 per cent. between 1890 and 1900 to 16.9 per cent. between 1900 and 1910, while the rate in the rest of the country increased from 20.9 per cent. to 22.8 per cent. Moreover, North Dakota had a rate of increase of 80.8 per cent., and the rate of increase in South Dakota—45.4 per cent.—was greater than the rate of increase in any Southern State.

We have not criticised the Canadian Northwest and the Pacific Coast States for beating the big drum in attracting new settlers, and they are to be commended for bringing from the drum notes emphasizing their attractions for investors and settlers. Our regret is that this drum-music has been reinforced, without the drum-beaters asking for it, by the blare of brazen instru-

ments sounding forth false notes of Southern conditions. If the moving spirits on the Pacific Coast or in the Canadian Northwest had caught any natives or alien adventurers either describing their respective localities as abodes of ignorance, disease and pauperism, or backing up such descriptions by their sympathy, we are inclined to believe that old-time vigilance committees or rail-riding parties would have come to the front. The concert has been pie for the drummers, but poison for the South.

In New York, Philadelphia and Chicago there is probably denser ignorance, more frightful disease and more abject poverty than in the whole \$65,000 square miles of the South. But in ten years, with the population of Philadelphia increasing 19.7 per cent.; of Chicago, 28.7 per cent., and of New York, 38.7 per cent., the population of the South has increased but 16.9 per cent. These cities do not encourage advertisement of their drawbacks, but by their accomplishments hold their own population and attract others.

Beating a big drum for the South while permitting the brazen instruments to decry it simply produces a discord which not only appalls would-be immigrants of a desirable character, but also drives Southerners to other parts. The drum could be effectively used for the South if it was used to drum from the South the performers upon the brazen instruments of misrepresentation of the South.

ON BEING LONESOME.

Arthur C. Burnett, real estate and insurance, Cadiz, Ky., in renewing his subscription to the MANUFACTURERS RECORD, writes:

I had my paper discontinued in August last, but felt so lonesome without it that I just had to resubscribe. Don't think I will ever try to be without it again.

George B. Toland of the Sidney Steel Scraper Co., Sidney, O., writes to the MANUFACTURERS RECORD:

We were very much interested in the enclosures of your *Daily Bulletin*, and particularly the items that were reprinted from the MANUFACTURERS RECORD of December 8. The table compiled in that issue of the MANUFACTURERS RECORD is enough to make any thoughtful mind consider the greatness of this American Republic, and we believe that in the space of another decade these figures will be increased at least 50 per cent. We think that the statement of a noted financier recently, that it would be but a short time until this country consumed all it produced, is not good logic, and certainly not in accordance with the statistics to produce an enhancement of value as the past decade has demonstrated. * * * The writer is decidedly of the opinion that your publication, as it circulates throughout the country, would be one of the best mediums that we could use to bring our products to the notice of the class of trade that sells and uses our products.

A. W. E. Capel, secretary and treasurer, the Snitherman Cotton Mills, Troy, N. C., writes to the MANUFACTURERS RECORD:

I must have your paper—it always interests me—I would feel lonesome without it. Often I feel that I have got value received just from one copy.

Mr. M. S. Clark, Roanoke, Va., writing to the MANUFACTURERS RECORD regarding its work for the South, says:

It is doing a grand work, which I hope is appreciated as it should be, as the South has a great future, which is being recognized by other sections of the country. Years ago it was "Go West." Now it is "Go South."

B. C. Milner Sons Company, contracting engineers, Louisville, Ky., writes to the MANUFACTURERS RECORD:

We can't do without your paper. Please renew our subscription and send bill to cover for one year.

RAILROAD CONSTRUCTION IN 1910

New Line Built in the South of About the Same Amount as Last Year, But Outlook Is Promising.

[Written for the Manufacturers Record.]

The annual review of railroad construction regularly prepared at this season for the MANUFACTURERS RECORD shows that 2048.1 miles of new line were completed this year in the South and Southwest, which is only 17 miles in excess of the amount that was built in 1909. The amount built in the South proper, that is, excluding Missouri and Oklahoma, was 1872.2 miles, or 11 miles less than last year. It is estimated that next year in the South and Southwest there will be built 3285 miles of line, or about 450 miles less than was estimated for 1910. In the South the outlook for the new year is 3003 miles, or 27 miles less than for the present year. It will be noted that the actual construction for 1910 runs but little more than half of the amount estimated at the beginning of the year, and if a corresponding result is reached during 1911 the actual construction in the entire section under consideration will consequently be less than for 1910.

The small amount of line built is due principally to the fact that the railroads, on account of agitation concerning rates and because of increased expenses, had little to encourage them to build new line, although much is needed, and the absence of some big roads from the record of construction is conspicuous. Consequently, until conditions are changed it is not to be expected that the financing of railroad extensions can be accomplished with ease or that the companies will be disposed to undertake new work excepting such as is absolutely necessary for the movement of traffic. The most conspicuous pieces of new railroad built in the past year were of the latter character, and those promised for 1911 are the same. It may be noted that in the estimates for the new year only construction which is apparently assured of accomplishment is considered in the table herewith; such as is merely contemplated is not embodied in the tabular statement, although it is mentioned in the detailed account below.

As usual, Texas leads the list of States with the largest amount of new track, namely, 791 miles, with which amount she is far in the lead, North Carolina coming next with 161 miles, from which point the figures dwindle to almost nothing, Maryland having the smallest amount of any State. Texas also leads the list for 1911 with 971 miles, and Florida second, proposing 481 miles, most of which is likely to be constructed. Georgia promises 379 miles, but from that the figures fall off abruptly and show the least promise of new mileage to be in Louisiana, namely, 35 miles. The new mileage in Texas consisted principally of the work done by the Santa Fe system, which will complete its extensive new construction, or at least most of it, during 1911.

In connection with this glance over the work of the year, it is particularly interesting to look farther and see what has been done since 1902, when a big record for railroad construction was made in the section under consideration. In that year 4100 miles of new line were reported built, of which 1274 miles was in the State now known as Oklahoma, but part of which was then called Indian Territory. Texas in 1902 had only 506 miles of line to report, although for the last several years she has built more than any other State. The grand total in 1903 fell off about 400 miles as compared with 1902, and in 1904

a low mark of 2421 miles was made, from which there was a gradual rise until 1907, in which year 3331 miles were reported. From this there was an abrupt drop to 1761 miles in 1908. In 1909 there were 300 more miles reported, and, as noted above, the amount this year is practically the same as last. The large table presented herewith reveals that Texas established a low-water mark for railroad construction in 1905, leaping next year to a high record, and the last two years she has practically lived up to that mark, although 1907 and 1908 were considerably below it. The record for Oklahoma is remarkable. After 1903 there was an abrupt drop in her amount of construction from 1111 miles to 255 miles, and since then there has been comparatively little built each year in that State. It must be remembered, however, that the large railroad companies soon after the opening of Oklahoma and Indian Territory to railroad construction vied with each other in building, thus supplying their needs in the way of trunk lines for some time ahead, although they now need to build more largely to keep up with the development of that country. The table follows:

	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Alabama.....	212	163	135	91	102	143	119	55	121
Arkansas.....	397	216	233	390	283	178	213	80	75
Florida.....	142	73	68	156	155	322	79	120	127
Georgia.....	292	114	125	178	226	101	96	162	95
Kentucky.....	57	116	15	113	75	76	45	88	86
Louisiana.....	256	406	125	244	472	537	177	96	131
Maryland.....	43	10	25	52	33	64	9	17	3
Mississippi.....	127	188	180	219	232	243	64	48	43
Missouri.....	220	244	382	80	76	112	26	15	32
North Carolina.....	153	125	84	129	192	264	124	153	161
Oklahoma.....	1274	1111	255	292	131	197	53	132	145
South Carolina.....	49	39	39	48	27	119	10	32	36
Tennessee.....	95	185	121	93	70	80	119	75	61
Texas.....	566	405	381	311	810	461	349	789	791
Virginia.....	94	54	62	34	162	255	210	28	33
West Virginia.....	123	268	200	175	216	79	86	141	119
	4100	3797	2421	2625	3262	3331	1761	2031	2048

One of the notable pieces of work accomplished in the past twelvemonth was the building of the Winston-Salem South-bound Railway from Winston-Salem to Wadesboro, N. C., this forming a link between the Norfolk & Western and the Atlantic Coast Line for interchange of business, but which will carry a tremendous coal tonnage from Virginia and West Virginia down into the South Atlantic States. Another was the Southern Pacific's cut-off in Louisiana. The Santa Fe's line above referred to, which will be completed next year, is also of great importance, as it will constitute a new route across Texas for traffic between the Gulf and the Pacific. Other notable work in prospect includes the Western Maryland's trunk line connection between Cumberland, Md., and Connellsville, Pa., to make a new route between the Atlantic coast, the Great Lakes in the Northwest; the Louisville & Nashville's extension of about 100 miles into the coal fields of Eastern Kentucky, together with the building of a branch by the Consolidation Coal Co. into the same region; the completion of the Key West extension of the Florida East Coast Railway and that company's building of a new line into the center of Southern Florida; the extension of the Chattanooga Southern to Atlanta and Birmingham; completion of the Galveston-Houston Interurban; besides sundry other pieces of important line.

The amount of new electric railway built, outside of purely local street railways, was 122 miles, and the amount promised for 1911 is about 370 miles. This latter does not, however, include any of the work proposed by the Piedmont Traction Co., the new organization of the Messrs.

Duke in the Carolinas, or the plans of the St. Louis & Kansas City Electric Railway, both of which are extensive projects which may soon begin construction.

Most of the data here presented was obtained from official sources by a thorough canvass of all the railroad companies in the States covered, although to complete the statistics additional data collected during the year (much of it also having been furnished through the courtesy of officials) was used. The table of construction represents only new main-line track, second tracks and sidings having no part therein. It shows in miles and hundredths of miles, according to the figures of the engineers, the amount of new line built in 1910 and also the amount of construction which will probably be accomplished in 1911, as follows:

	1910.	1911.
Alabama.....	129.4	159.5
Arkansas.....	75.14	117.
Florida.....	126.88	481.5
Georgia.....	94.8	379.5
Kentucky.....	86.1	188.27
Louisiana.....	131.2	35.
Maryland.....	3.	61.
Mississippi.....	42.87	58.
Missouri.....	32.2	141.
North Carolina.....	161.25	191.
Oklahoma.....	143.7	141.
South Carolina.....	35.64	90.
Tennessee.....	60.65	86.5
Texas.....	791.27	971.
Virginia.....	31.18	65.93
West Virginia.....	109.82	119.51

Total miles..... 2048.10 3285.71

The detailed statement of the amount of line built by the various companies during the year and, as far as possible, new con-

struction decided upon and which will probably be built in 1911 is as follows:

Aberdeen & Ashboro—Candor to Ellerbe, N. C., 18 miles.	
Abilene & Southern—Anson to Hamlin, Tex., 17 miles.	
Alabama, Florida & Southern—Marshall, Ala., south 1 1/2 miles. For 1911, indefinite.	
Alabama, Tennessee & Northern—Extension south to Emelle, Ala. (12 miles), near Ramsey and beyond, a total of 22 miles.	
Alcohol Railroad—Kirby Station to Hamville, S. C., 4 miles. For 1911, indefinite.	
Altus, Lubbock & Roswell—For 1911, Memphis to Lockney, Tex., 69 miles.	
Angelina & Neches River—Alco to Nacolina, Tex., 7 1/4 miles. For 1911, possibly from Nacolina to Chireno, 10 miles.	
Apalachicola Northern—Between Apalachicola and St. Joseph, Fla., to complete line, 3 miles.	
Aransas Terminal—For 1911, from connection with San Antonio & Aransas Pass Railway to Harbor Island, near Aransas Pass, Tex., 7 miles.	
Arkansas Eastern—For 1911, Heafer to Earl, Ark., 10 miles.	
Arkansas, Oklahoma & Western—Freeman to Monte Ne, Ark., 7 miles. For 1911, Cave Springs to Fayetteville, Ark., 29 miles; Fayetteville to Memphis, Tenn., 278 miles; total, 285 miles. Contract is let. Road is reorganized as the Kansas City & Memphis Railway.	
Atchison, Topeka & Santa Fe—San Angelo to Sterling City, Tex., 43 miles; Lubbock to Coleman, Tex., 160 miles; Plainview to Floydada, Tex., 14 1/4 miles; Slaton to Lamesa, Tex., 54 miles; Lometa to Colorado River, 14 miles; Brady to Melvin, Tex., 12 1/4 miles; total, 297 1/4 miles. For 1911, Colorado River to Eden, Tex., about 95 miles.	
Athens & Southeastern—For 1911, Athens to Arcadia, La., 15 miles.	
Atlanta & Carolina Electric—For 1911, Atlanta toward Augusta, Ga., 30 miles.	
Atlanta, Birmingham & Atlantic—Pelham to Mulga, Ala., 28 miles; Bessemer to Birmingham, Ala., 12 miles; total, 40 miles.	
Atlantic Coast Line—For 1911, Haines City to Avon Park, Fla., about 40 miles.	

Augusta Northern—For 1911, Ward to Saluda, S. C., 12 miles.	
Aycock Lumber Co.—Alford southwest to Orange Hill, Fla., 10 miles. For 1911, from Alford southeast to timber land, 16 miles.	
Barber Lumber Co.—Hartburg, Tex., due west 2 miles to finally connect with Orange & Northwestern. For 1911, 2 miles more.	
Bartlett-Florence—Bartlett to Jarrell, Tex., 11 miles. For 1911, Jarrell to Florence, Tex., 13 miles, on which grade is completed. Line is chartered from Milano Junction to Lampasas, Tex., 94 miles.	
Bayshore Rapid Transit—For 1911, Houston to La Porte, Tex., about 40 miles. Contract let for 10 miles.	
Beaumont & Great Northern—Triality River toward Weldon, Tex., about 10 miles. For 1911, to complete line to Weldon, about 10 miles more.	
Beaumont-Saratoza Transportation Co.—For 1911, Jordans to Batson, Tex., 17 miles.	
Birmingham Southern—From Number 5 Mine, Wylam, Ala., to Number 16 Mine, Bayview, 5.47 miles; connection with Atlanta, Birmingham & Atlantic Railroad to Tennessee Coal, Iron & Railroad Co.'s line at the West Bessemer furnaces, .71 mile; Ensley to West Bessemer, 7.13 miles; Ensley-Bessemer line to Corey, 2.69 miles; total, 15.40 miles.	
Black Bayou Railway—Myrtis, La., into Marion county, Texas, 7 miles, 4 miles being in Louisiana and 3 miles in Texas. For 1911, indefinite.	
Blytheville, Burdette & Mississippi River—For 1911, Burdette to Blytheville, Ark., 7 miles.	
Bonlee & Western—Wells to Bennett, N. C., 5 miles.	
Bowdon Railway—Bowdon Junction to Bowdon, Ga., 12 miles.	
Brinson Railway—Millhaven to Sardis, Ga., 6.3 miles. For 1911, contemplated, Sardis to Athens, Ga., 102 miles.	
Brownsville Belt Line—Road near Brownsville, Tex., connecting sugar plantations with the St. Louis, Brownsville & Mexico Railroad, 12 miles.	
Bryan-College Interurban—Bryan to College, Tex., 6 1/2 miles.	
Buckwalter (J. R.) Lumber Co.—Near Union, Miss., 4 miles.	
Buffalo Creek & Gauley—Cressmont to Rich Run, W. Va., 10 miles. For 1911, possibly extension to Huttonsville via Camden-on-Gauley.	
Cache Valley—For 1911, possibly from Sedgwick to Newport, Ark., about 35 miles; also Sedgwick to Paragould, about 17 miles; total, 52 miles.	
Caddo & Choctaw—Spears to Cooper, Ark., 6 miles.	
Cape Charles Railroad—Benders Sliding via Capeville to Townsend, Va., 8 miles.	
Cape Girardeau, Charleston & Hickman—For 1911, Anell via Kelo and Charleston to Dorena, Mo., 52 miles. Contract let.	
Carnesville Railway—For 1911, Toccoa to Carnesville, Ga., 20 miles.	
Carolina, Cincinnati & Ohio—Kiser to Laurel Branch Mines, Va., 9.2 miles. For 1911, contemplated, from Elkhorn City, Ky., to Laurel Branch Junction, 33 miles. All this work is under the charter of the Elkhorn Southern Railway.	
Cassville & Western—For 1911, Exeter, Mo., westward, 3 miles; Cassville, Mo., to Eureka Springs, Ark., 28 miles; total, 31 miles.	
Central Arkansas & Eastern—Stuttgart to Fairmount, Ark., 7 miles. For 1911, continuation of line to McGregor 11 miles; also to Hazen, Ark., 17 miles.	
Central of Georgia—Completion of spur from Henry Ellen Branch near Birmingham, Ala. to coal mines, 3 miles.	
Chambersburg, Greencastle & Waynesboro—For 1911, Pen-Mar via Highfield, Md., to Blue Ridge Summit, 3 miles.	
Charlotte Harbor & Northern—Pierce to Mulberry, Fla., 4 miles.	
Charlotte, Monroe & Columbia—For 1911, some construction may be undertaken in South Carolina, but is not yet decided.	
Chattanooga Southern—For 1911, Harrisburg to Trion, Ga., 8 miles; Rome to Rockmart, Ga., about 20 miles; Gadsden to Birmingham, Ala., 50 miles; total, 87 miles.	
Cherokee Belt & Interurban—For 1911, contemplated, Skiatook to Prior, Okla., 43 miles.	
Cherryvale, Oklahoma & Texas—For 1911, between Vinita, Okla., and Caney, Kans., 20 miles.	
Chesapeake & Ohio—Ethel, W. Va., to Buffalo Creek, 22 miles; Mahan to Keeferton, W. Va., 5 miles; extension to Vanceburg, Ky., 10 miles; total, 37 miles.	
Chicago, Memphis & Gulf—For 1911, Tiptonville, Tenn., to Hickman, Ky., 21 miles.	
Chicago, Rock Island & Pacific—Completion of extension from a point 4 miles west of Adrian, Tex., to the New Mexico boundary, 18 1/2 miles.	

- Chicago, Weatherford & Brazos Valley—For 1911, Weatherford to Bridgeport, Tex., 36 miles; contemplated, Bridgeport to Gainesville, Tex., 56 miles.
- Chickasha Terminal—At Chickasha, Okla., 5 miles.
- Citizens' Traction Co.—From Oklahoma City, Okla., to Great Northeastern Park, 4 miles. For 1911, contemplated, 15 miles in Oklahoma City and suburbs; also from Oklahoma City to Henryetta, Okla., 100 miles; total, 115 miles.
- Clinton & Oklahoma Western—Clinton to Butler, Okla., 22 miles. For 1911, contemplated, Butler to Shattuck, Okla., 80 miles; Butler, Okla., to Canadian, Tex., 120 miles; total, 200 miles.
- Cloverdale & Catawba Furnace Railway—For 1911, Cloverdale to Catawba Furnace, Va., 11 miles.
- Coal & Coke—From Roaring Creek Junction toward Elkins, W. Va., 3½ miles. For 1911, to complete line to Elkins, 4 miles.
- Concordia Central—From a point on the Mississippi River in Louisiana (7½ miles south of Vidalia) toward Alexandria, 6 miles. The D. K. Jeffries Lumber Co. is said to be interested.
- Consolidation Coal Co.—For 1911, from Shelby, Ky., southwest via Shelby Gap and Potter Gap to coal fields, 30 miles.
- Crosbyton & South Plains—Lubbock to Crosbyton, Tex., 40 miles. For 1911, Crosbyton to Spur, Tex., 35 miles.
- Crystal City & Uvalde—Crystal City to Carizozo Springs, Tex., 12 miles; Crystal City to Gardendale, Tex., 41 miles; total, 53 miles. For 1911, probably 30 miles.
- Cullman Coal & Coke Railroad—From Cullman, Ala., 6½ miles. For 1911, to complete the line via Trimble and Bremen to Julian, 17½ miles.
- Cumberland Railroad—Warren to Brush Mountain, Ky., 3 miles; Warren to Anchor, Ky., branch, 3 miles; total, 6 miles.
- Cummer Lumber Co.—From Trenton, Fla., to timber lands, 8 miles.
- Dargan Lumber Co.'s Railroad—Effingham, S. C., southeast about 12 miles to a point 1½ miles beyond Hyman. For 1911, continuation of line about 15 miles to Allison's Landing, on the Pee Dee River; also perhaps from Effingham north to Florence, S. C., about 10 miles.
- Denver, Kingfisher & Gulf—Elk City, Okla., northwest 4½ miles; O'Keene to Kiel, Okla., 13 miles; total, 17½ miles. For 1911, Oklahoma City to a connection with the Kansas City, Mexico & Orient Railway, 85 miles. Contract let on first 5 miles.
- Denlphin, Kensett & Searey—Near Kensett, Ark., 6 miles of lumber railroad.
- Durham & Charlotte—For 1911, extension of the Raleigh & Western from Colon to Sanford, N. C., 3 miles.
- Eldorado & Wesson—For 1911, from Wesson, Ark., southwest 20 miles.
- Elk & Little Kanawha—Gassaway to Rosedale, W. Va., 22 miles. For 1911, from Rosedale to Stumptown, W. Va., 18 miles.
- England & Clear Lake—Lockesville to Laster's Landing, Ark., 4 miles.
- Enid, Ochiltree & Western—Dalhart to Wilko, Tex., 13 miles. For 1911, Dalhart to Pumas, Tex., 22 miles.
- Estacado & Gulf—For 1911, west from Roby, Tex., possibly 25 to 50 miles; also probably some construction east to McCaulley, Tex.
- Fairburn & Atlanta—For 1911, Fairburn to Atlanta, Ga., 20 miles, all grade being done.
- Fairmont & Clarksburg Traction Co.—For 1911, from Clarksburg, W. Va., via Mount Clare and West Milford to Weston, W. Va., 24 miles, of which 7 miles are nearly completed between Clarksburg and Mount Clare. This is chartered as the Clarksburg & Weston Railway.
- Fairmont & Northern—Bellevue to Fairview, W. Va., 12 miles.
- Fernwood & Gulf—Tylertown to Kokomo, Miss., 12 miles.
- Florida East Coast—For 1911, Knight's Key to Key West, Fla., 45 miles; Maytown to Lake Okechobee, Fla., 120 miles; Whittier to Bassinger, Fla., 30 miles; total, 205 miles.
- Florida Railway—For 1911, Live Oak to Jacksonville, Fla., 82 miles; Jacksonville to Fernandina, Fla., 23 miles; total, 111 miles. About two-thirds of grading done. Contemplated, Perry to Tallahassee, Fla., about 50 miles.
- Fort Smith, Sublaco & Eastern—Sublaco to Scranton, Ark., 8 miles. For 1911, contemplated, Scranton to Dardanelle, Ark., 23 miles.
- Fort Worth & Rio Grande—Brady to Meard, Tex., 37½ miles. This line is of the Frisco system.
- Franklin & Abbeville—David Junction to Milton, La., 18½ miles. For 1911, indefinite.
- Frederick Railroad—Belt line at Frederick, Md., 3 miles. For 1911, city loop, 5 miles; contemplated, Thurmont to Emmitsburg, Md., 8 miles; Jefferson to Brunswick, Md., 7 miles; total, 15 miles.
- Galveston-Houston Interurban Electric—Between Galveston and Houston, Tex., 30½ miles. For 1911, to complete line between the two cities, about 18½ miles.
- George Meyer's Lumber Railroad—For 1911, from Kasey, Va., to Smith's Gap, 20 miles.
- Georgia & Florida—Swainsboro Junction to Normentown Junction, Ga., 21 miles; extension at Valdosta, Ga., 1½ miles; total, 22½ miles.
- Georgia, Florida & Alabama—Kimbrough to Richland, Ga., 7 miles.
- Georgia Southwestern & Gulf—For 1911, from Albany, Ga., to St. Andrews Bay, Fla., about 155 miles.
- Greenville & Knoxville—Cleveland to Riverview, S. C., 1.6 miles; Bleachery Spur to Monaghan Mills, 4 miles; total, 2 miles. For 1911, Monaghan Mills to River street, Greenville, 2 miles; Riverview to River Falls, S. C., 3 miles; total, 5 miles; contemplated, from River Falls, S. C., to Breward, N. C., 30 miles.
- Gulf & Interstate—For 1911 (on the Port Bolivar Iron Ore Railway), from Longview, Tex., toward Hughes Spring, Tex., 30 miles.
- Gulf & Sabine River—From Fullerton, La., northwest 3 miles. For 1911, perhaps to Leesville, La., about 23 miles. Terminus not decided.
- Gulf Coast & Provident City—For 1911, from Pierce to Provident City, Tex., 35 miles, on which 5 miles of grade are completed; contemplated, from Provident City to Hallettsville, Tex., 26 miles.
- Gulf, Colorado & Santa Fe—Lometa to Colorado River, Tex., 14 miles; Brady to Whiteland, Tex., 12 miles; San Angelo to Sterling City, Tex., 43 miles; total, 69 miles. The last-named road is called the Concho, San Saba & Llano Valley line. For 1911, Colorado River to Brady, Tex., 53 miles; Whiteland to Eden, Tex., 21 miles; total, 74 miles. See Atchison, Topeka & Santa Fe.
- Gulfport & Mississippi Coast Traction Co.—Harborview to Pass Christian, 5 miles; loop line in Gulfport, 2.2 miles; total, 7.2 miles. For 1911, contemplated, Gulfport to Bernard Bayou, 3½ miles.
- Gulf, Texas & Western—Olney via Coston, Megargel, Westover and Rendham to Seymour, Tex., 35 miles. For 1911, contemplated, west from Seymour to a connection with the Kansas City, Mexico & Orient Railway, 33 miles; east from Jacksboro to Dallas, Tex., 95 miles; total contemplated, 128 miles.
- Hampshire Southern—Moorthfield to Petersburg, W. Va., about 14 miles.
- Harriman, Knoxville & Eastern—For 1911, from Harriman, Tenn., east 17½ miles; also contemplated, continuation to Knoxville, 17½ miles more.
- Hawkinsville & Western—For 1911, Hawkinsville to Perry, Ga., 23½ miles, on which about 13 miles of grade are done.
- Illinois Central—At Birmingham, Ala., 2 miles. For 1911, contemplated, Batesville, Miss., southwest to the Yocona River, 15 miles.
- Interstate Railroad—From end of line at Stonega, Va., to new sawmill, 52 of a mile. For 1911, Roaring Fork to Roaring Rock Fork on Pot Camp Branch, Va., about 3½ miles. About 2 miles graded.
- Irwinton Railway—For 1911, Irwinton to McIntyre, Ga., 3½ miles.
- Isothermal Traction Co.—For 1911, Gastonia via Rutherfordton to Asheville, N. C., 100 miles.
- Jacobi Lumber Co.—For 1911, Moline to McKinnonville, Fla., 18 miles.
- Jewell-Jellco Coal Co.—From Wofford, Ky., on the Louisville & Nashville Railroad, to coal mines, 1½ miles.
- Kansas City, Mexico & Orient—San Angelo toward Eldorado, Tex., 2½ miles; total, 16 miles. For 1911, San Angelo to Eldorado and Del Rio, Tex., to complete line, 157½ miles; Mertzon to Fort Stockton, Tex., 130 miles; total, 287½ miles. Construction is also under way on the company's line in Mexico.
- Kansas City Southern—For 1911, about 20 miles of new line now under construction.
- Kansas City Terminal—Sheffield to Coburg, Mo., 1.2 miles.
- Kentucky Highlands—Millville to Versailles, Ky., 9½ miles.
- Kentucky Midland—Midland to Earle's, Ky., 2½ miles. For 1911, Earle's to Madisonville, Ky., 14 miles.
- Kentucky & Tennessee—For 1911, contemplated, 20 or 30 miles along the South Fork of the Cumberland River in Kentucky and Tennessee for the Stearns Coal & Lumber Co. Present line is 10½ miles long, from Stearns, Ky., to Yamacraw and Oz.
- Kentwood & Eastern—From Millepost 20 to
- Foley, La., 4 miles; from Cutress, La., to Sumter, Miss., 3 miles; total, 7 miles.
- Kinder & Northwestern—Kinder to Drew, La., 10 miles.
- Knoxville, Sevierville & Eastern—For 1911, Sevierville to Henderson Springs, Tenn., 6 miles; Sevierville to Jones' Cove, Tenn., 20 miles; total, 26 miles; contemplated, Sevierville to Cosby, Tenn., 30 miles.
- Laclede, Dallas & Western—For 1911, Phillipsburg to Buffalo, Mo., 22 miles; beyond Buffalo, 8 miles; total, 30 miles.
- Laurel Fork Railroad—For 1911, Elizabethton via Hampton to Laban, Tenn., 15 miles.
- Laurinburg & Southern—Laurinburg to Wagram, N. C., 12 miles.
- Lexington & Eastern—For 1911, from a point just east of Jackson, Ky., to a point about 9 miles east of Whitesburg, Letcher county, Kentucky, approximately 9½ miles. (See Louisville & Nashville.)
- Lexington Interurban Railways, Electric—In Lexington, Ky., 2 miles. For 1911, also in Lexington, 3 miles. This construction connects with the line from Lexington to Nicholasville, built in 1909.
- Linville River Railway—See Smoky Mountain Railway.
- Little Rock, Maumelle & Western—Douglass to Maumelle, Ark., 3 miles.
- Louisiana & Arkansas—For 1911, contemplated, Jena, La., to Natchez, Miss., 50 miles.
- Louisiana Southern—For 1911, contemplated.
- Belair to Bohemia, La., 20 miles.
- Louisville & Eastern—Beechwood to Shelbyville, Ky., 22 miles.
- Louisville & Nashville—On the Cairo & Thebes Railroad, Cairo to Thebes, Ill., 24.29 miles; on the Wasioto & Black Mountain Railroad, Avila to Baxter, Ky., and Yellow Creek Branch, 31.35 miles; on the Athens & Tellico Railway, Athens Junction to Athens, Tenn., 1.82 miles; on the Kentucky Highlands Railroad, between Millville and Versailles, Ky., 1½ miles; on the Madison & Goodletts Railroad, from Goodletts to Angul, Tenn., .83 mile. Total, 59.79 miles. For 1911, from near Jackson, Ky., to Craftsville, Ky., 97 miles, all under contract; Baxter to Benham, Ky., 28 miles; Yellow Creek Branch, 2.40 miles; Tom's Creek Branch, 2 miles; Baxter to Harlan, Ky., 2.37 miles. Total, 131.77 miles. The company is also building 10 miles from Corduroy, Ala., to the Vanderburg Lumber Co.'s mill.
- Manufacturers' Railway—For 1911, contemplated, from St. Louis, Mo., to Springfield, Mo., 175 miles; also addition to its 19 miles long terminal line at St. Louis, the addition to be a belt.
- Marianna & Blountstown—Alpha to Blountstown, Fla., 15 miles, thus completing 30 miles from Marianna.
- McCrory & Beedeville Southern—For 1911, contemplated, McCrory to Beedeville, Ark., 14 miles, on which about 7 miles of grade are done.
- Memphis & Lakeview Traction—Memphis, Tenn., to Lakeview, Miss., 11 miles.
- Mercer Electric—For 1911, Athens to Princeton, W. Va., 6 miles, on which grading is completed.
- Mexico, Perry & Santa Fe Traction—Mexico, Mo., north 1 mile; Mexico to Champ, 4 miles; total, 5 miles. For 1911, Mexico to Molino, north, 8 miles; Mexico to Hereford, Mo., south, 20 miles; total, 28 miles, all under contract.
- Middle Island Railroad—For 1911, Sistersville to Middlebourne, W. Va., 13 miles, under contract. Extension contemplated to Shirley, 30 miles; also to Salem, W. Va., 48 miles.
- Middle Tennessee—Between Franklin and Leatherwood, Tenn., 11 miles. For 1911, Water Valley to Mount Pleasant, Tenn., 17 miles.
- Miller-Crozier Lumber Co.—From Anthony, W. Va., to timber land, 7 miles. For 1911, 2 miles.
- Mill Mountain Electric—Roanoke, Va., to summit of Mill Mountain, 2 miles.
- Missouri, Oklahoma & Gulf—Durant, Okla., to Denison, Tex., 26.2 miles, of which 17.2 miles are in Oklahoma and 9 miles in Texas. For 1911, contemplated, Coalton to Okmulgee, Okla., 13 miles; Wapanucka to Bronide, Okla., 5 miles; total, 18 miles. The company, as heretofore officially reported, has under consideration an extension north from Wagoner, Okla.
- Morgantown & Dunkard Valley—Randall to Barker, W. Va., 2 miles. For 1911, contemplated, Barker to Cassville, W. Va., 2 miles.
- Morgantown & Southern—For 1911, Morgantown, W. Va., to Fairmont, W. Va., 27 miles, of which 5 miles are under construction.
- Nacogdoches & Southeastern—Dockville, Tex., to end of track, nearly 7 miles.
- New Iberia & Northern—From a point 5 miles out of Port Barre to New Iberia, La.,
- 42.2 miles, thus completing line between the two places, via Arnaudville, Parks and Loreauville, 48.2 miles.
- New Orleans, Mobile & Chicago—Pontotoc Junction to Pontotoc, Miss., 2.77 miles. For 1911 contemplated extension from a point in Mississippi to New Orleans, La., about 100 miles.
- New Orleans, Texas & Mexico—Erwinville to Ingleside, La., 7 miles, in Pointe Coupee parish. A Frisco system line.
- Norfolk & Western—Only about 1½ miles of spurs have been built during the year, thus: Canebrake, W. Va., .8 mile; near Thacker, W. Va., .51 mile; near Radford, Va., .36 mile; East Lynn, W. Va., .06 mile; total, 1.77 miles. For 1911, Petersburg Belt Line and connections from Poe to Addison, Va., 10.6 miles; Dry Fork Branch and connections from Canebrake, W. Va., to Cedar Bluff, Va., 14.7 miles; North Fork Branch from Jeannette, W. Va., 4.31 miles; total, 29.61 miles.
- North & South Carolina—Dillon to Mullins, S. C., 17 miles. For 1911, McBee to Florence, S. C., 40 miles, via Hartsville and Darlington, on which work is reported begun.
- North Carolina & Virginia—For 1911, Spray, N. C., to Ridgeway, Va., 12 miles.
- North Carolina Public Service Co. (High Point Line) Electric—2 miles at High Point, N. C.
- Oberlin, Hampton & Eastern—Oberlin to Hampton, La., 10 miles. For 1911, possibly extension to Eunice, La.
- Ocala Northern—For 1911, Ocala to Palatka, Fla., about 75 miles. Construction started via Port McCoy and Rodman.
- Ocala & Southwestern—Ocala, Fla., southwest to Dunnellon, Fla., 21 miles.
- Oklahoma, Kansas & Missouri—For 1911, from Hattontville, Okla., to Galena, Kans., 23 miles; also Riverton Junction to Columbus, Kans., 12 miles; total, 35 miles.
- Oklahoma Union Traction—For 1911, Tulsa to Sapulpa, Okla., 14 miles.
- Orangeburg Railway—For 1911, Orangeburg to North, S. C., 18 miles. Under contract.
- Ouachita & Northwestern—Oakland to Newport, La., 10 miles.
- Overton County Railroad—For 1911, Livingston, Tenn., to Somerset, Ky., 76 miles, if reorganization plan goes through.
- Paris & Mount Pleasant—Paris to Bogota, Tex., 24 miles. For 1911, Bogota to Mount Pleasant, Tex., 29 miles.
- Pascagoula Northern—Scranton to Moss Point, Miss., 3.93 miles; also end of track to Evanston, Miss., 3.97 miles; total, 7.9 miles.
- Peach River Lines—For 1911, near Galveston, Tex., contemplated, extension of the Riverside and Gulf division, indefinite.
- Pecos Valley Southern—Pecos to San Solomon, Tex., 42 miles, via Sargent, Hoban, Saragosa and Balmorhea. For 1911, contemplated, San Solomon to Alpine or Marfa, Tex., approximately 60 miles.
- Pelham & Havana—Cairo to Calvary, Ga., 15 miles.
- Pensacola, Mobile & New Orleans—For 1911, from a connection with the Pensacola, Alabama & Tennessee Railroad in Florida to Mobile, Ala., 45 miles.
- Perla Northern—Price's to Carpenter, Ark., 6 miles. For 1911, Lonsdale to Whittington, Ark., 8 miles.
- Portland & Southeastern—Empire to Albritton, Ark., 6 miles; Curt to Hitt, Ark., 5 miles; total, 11 miles. For 1911, Albritton, Ark., to Delhi, La., 40 miles.
- Richmond & Chesapeake Bay—For 1911, Ashland to Doswell, Va., 7 miles.
- Roanoke Railway—For 1911, Thelma, N. C., to a point near Valentine, Va., 5 miles.
- Roanoke River Railway—For 1911, contemplated extension. Present line is 12 miles long from Manson, on the Seaboard Air Line, northwest to Townsville, N. C.
- Roaring Fork—Roaring Fork to Pot Camp, Va., 5 miles.
- Robinson Land & Lumber Co.—For 1911, Chisora, Miss., to Thompson, 30 miles.
- Rockingham Railroad—For 1911, Roberdel to Gilson, N. C., 21 miles.
- Rock Island, Texico, Farwell & Gulf—For 1911, Farwell to Center, Tex., 30 miles. The entire line will be from Farwell to Pecos, Tex., 190 miles.
- Rocky Mount & Northern—For 1911, proposed extension of narrow-gauge logging railroad, at present 13 miles long from Rocky Mount, N. C.
- Rome & Northern—For 1911, Gore to Trion, Ga., 9 miles; also contemplated extension to Tunnel Hill, Ga., 34 miles.
- St. Francis County Railroad—De Lassus to Farmington, Esther and Flat River, Mo., 15 miles.
- St. Louis & San Francisco—Marion to Hulbert, Ark., 4½ miles. Construction on the New Orleans, Texas & Mexico Railroad, 7 miles, and the Fort Worth & Rio Grande

Railway, 37½ miles, elsewhere reported, is also in the Frisco system.

St. Louis, Brownsville & Mexico—Simpson to Collegeport, Tex., 6.1 miles; Donna, Tex., to end of track, 2.42 miles; total, 8.52 miles.

St. Louis Southwestern—Newro Junction to Argenta, Ark., 3.14 miles.

St. Marys & Kingsland—For 1911, contemplated indefinite extension of present line, which is 11 miles long from St. Marys to Kingsland, Ga., on the Seaboard Air Line.

Salisbury, McAlester & Southern—For 1911, McAlester to Savanna, Okla., 10 miles, which is under contract; contemplated, from Savanna to Lawton, Okla., 150 miles.

San Benito & Rio Grande—San Benito, Tex., north, 6 miles; San Benito, south, 6 miles; total, 12 miles. For 1911, for which contract is let, extensions of 25 miles on the San Benito irrigation tract.

Sanford & Troy—For 1911, Colon to Sanford, N. C., 4 miles.

Sanford Traction Co. and Sanford & Everglades Railroad—On the latter, from Beck Hammock to Cameron City, Fla., 2.2 miles; Cameron City to Mecca, Fla., 4.5 miles; total, 6.7 miles; on the former, Sanford, Fla., to junction with the Sanford & Everglades Railroad, 1.25 miles; total, 7.95 miles. For 1911, extension from Sanford to Orlando, Fla., 22 miles, by the Sanford Traction Co.

Savannah, Augusta & Northern—For 1911, Garfield to Stevens Crossing, Ga., 14 miles, connecting with the Georgia & Florida Railway.

Seaboard Air Line—Early Bird to Dunnellon, Fla., 15.94 miles; Dunnellon to Hernando, Fla., about 12 miles; Nichols to Mulberry, Fla., 5 miles; Edson Junction to Agricola, Fla., 12.34 miles; spur to Patterson Cotton Mills in North Carolina, .37 mile; spur to Republic Cotton Mills in South Carolina, .61 mile; total, about 46 miles. Construction in Florida amounts to about 44.28 miles. For 1911, Fruitville to Venice, Fla., about 18 miles.

Sewell Valley Railroad—Rainelle down Meadow River, W. Va., 4 miles. For 1911, continuation to Burdett's Creek, 8 miles.

Shaffers Lumber Railroad—Rosman, N. C., to sawmill, 3¼ miles. For 1911, from mill to Gap, about 4 miles. More may be built, but indefinite.

Shearwood Railway—From Watersville, Ga., 4 miles. For 1911, from Black Creek to Seaboard Air Line Railway, 14 miles; contemplated, from Brooklet, Ga., to Oliver, 14 miles.

Smoky Mountain Railway—From Ritter, N. C., to Swain county, on the Southern Railway, to timber land, 10 miles. For 1911, about 10 miles more. The W. M. Ritter Lumber Co. is interested, as is the Lynnvill River Railway.

Southern Pacific—On Morgan's Louisiana & Texas Railroad, between Lafayette and Baton Rouge, La., 7.47 miles; on the Louisiana Western, between Eunice and Mamou, La., about 1 mile; total, about 8½ miles.

Southern Railway—On the Virginia Southwestern Railway, extension from Moccasin Gap, Va., to Persia, Tenn., 38 miles.

Southwestern Railway—Scotland to Archer City, Tex., 10 miles.

Sparks Western—Pineboro to Kingwood, Ga., 5 miles. For 1911, Kingwood to Moultrie, Ga., 1½ miles. This line has been acquired by the Georgia & Florida Railway.

Statesville Air Line—For 1911, Statesville to Yadkinville, N. C., 25 miles. Entire line proposed is from Statesville via Yadkinville, Booneville and Dodson to Mt. Airy, N. C., 64 miles.

Stephenville North & South Texas—For 1911, Gatesville to Hamilton, Tex., 32 miles; Hamilton to Comanche, Tex., 35 miles; total, 67 miles; contemplated, Stephenville to Thurbert, Tex., 25 miles.

Stuttgart & Rice Belt—Devalis Bluff to Stuttgart, Ark., about 20 miles.

Sublaco Traction Co.—See Fort Smith, Sublaco & Eastern.

Sugarland Railway—Burnside Junction to Ramsey, Tex., 17 miles, which will probably be absorbed by the Sugarland Railway Co., although not yet its property.

Summit & McComb Motor Line—Godhold Wells to Summit, Miss., 1¼ miles; Summit to McComb City, Miss., 3¼ miles; total, 5 miles. For 1911, in McComb City, 1 mile.

Sumter & Choctaw—For 1911, Edna to Robt John, Ala., 5 miles.

Sycamore Coal Co.—For 1911, near Vivian, W. Va., 3 miles.

Tampa & Gulf Coast—Gulf Pine to Tarpon Springs, Fla., 11½ miles.

Tampa & Jacksonville—For 1911, Fairfield, Fla., south, 7½ miles. Work under way.

Tampa Northern—Tooke Lake to Centralia, Fla., 2 miles.

Tatum Lumber Co.'s Railroad—Near Hattiesburg, Miss., 4 miles. For 1911, extension contemplated.

Temple Northwestern—Out of Temple, Tex., 6 miles. For 1911, to complete line to Gatesville, Tex., 28 miles; reported contemplated extension from Gatesville to Hico, 40 miles.

Tennessee Railway—Bill's Branch to Asher's Fork, Tenn., 3 miles.

Terry, Janesville & Southern—Terry to Janesville, La., 6 miles.

Texas Central—De Leon to Cross Plains, Tex., 41 miles. For 1911, contemplated, Waco to Trinity, Tex., 129 miles; also from Rotan, Tex., westward on the plains, indefinite.

Texas Southern—For 1911, Poteet to Pleasanton, Tex., 8 miles.

Tombigbee Valley—For 1911, from Silas, Ala., north, 12 miles.

Trinity Valley & Northern—Fouts to Lum, Tex., 5 miles.

Union Springs & Northern—For 1911, Fort Davis to Milstead, Ala., 20 miles. Construction under way.

Union Utilities Co.—For 1911, Sabraton to Delislow, W. Va., 2½ miles.

Valdosta, Moultrie & Western—From a point beyond Morren, Ga., to Moultrie, Ga., 27 miles. For 1911, from Moultrie to Fort Gaines, Ga., 106 miles. The latter will be constructed under the name of the Moultrie, Fort Gaines & Western Railroad.

Valley River Railroad—Clay Run to Elk Water, W. Va., 1½ miles.

Virginia & Carolina Southern—Hope Mills to Elizabethtown, N. C., 16 miles, completing line from St. Pauls to Elizabethtown, a total of 28 miles.

Virginian Railway—Loop Junction to Winding Gulf, W. Va., 2.1 miles. The line between Mullens and Pemberton, W. Va., 23.69 miles, was actually completed early in 1910, but, being nearly done, was reported in the construction of 1909. In 1911 the company will revise the main line between

Harper and Clirtsville, W. Va., nearly 2 miles.

Warren, Johnsville & Saline River—For 1911, Goepel to Johnsville, Ark., 5 miles.

Washington & Choctaw—Red Creek to Matthews, Ala., 12 miles.

Washington, Potomac & Chesapeake—For 1911, Mechanicsville to Laurel Grove, Md., 5 miles.

Western Maryland—For 1911, from a point 1½ miles out of Cumberland, Md., to Connelville, Pa., 87 miles, of which 19 miles are in Maryland.

West Virginia Midland—Marpleton to Long Run, W. Va., 4¼ miles. For 1911, contemplated, Webster Springs to Valley Fork of Elk River, 21 miles.

West Virginia Northern—Kingwood Junction to Kingwood, W. Va., .6 mile.

Wichita Falls Route—On the Wichita Falls & Northwestern from Mangum to Elk City, Okla., 40 miles; on the Altus, Wichita Falls & Hollis Railway from Altus, Okla., to the Texas boundary, 42 miles; on the Wichita Falls & Wellington Railway from the Oklahoma boundary to Wellington, Tex., 15 miles; total, 97 miles. For 1911, extension from Elk City to Hammon, Okla., 18 miles. Work in progress.

Wicomco Electric & Power Co.—For 1911, from Salisbury, Md., to Nanticoke Point or Roaring Point, Md., 30 miles.

Williamsville, Greenville & St. Louis—Hiram to Cascade, Mo., 11 miles.

Wilmington, Brunswick & Southern—Toan Creek to Bolivia, N. C., 5 miles. For 1911, Bolivia to Southport, N. C., 13 miles. This will complete line from Navassa to Southport, about 28 miles.

Winston-Salem Southbound—Winston-Salem to Wadesboro, N. C., 89 miles.

Woodville Railroad—For 1911, contemplated, Shaw to Crawfordville, Fla., 11 miles.

Wrightsville, Adrian & Lyons—For 1911, from Lyons, Ga., to Wrightsville and Adrian, 59 miles, on which 6 miles are reported graded.

trunk-line railroads of the South today have been built on practically the identical lines mapped out and laid down by the engineers, promoters and dreamers who turned their attention to railroad construction in the days from 1835 to the outbreak of the war. So, much that may seem visionary today may easily become the commonplace reality of the morrow.

One of the interesting projects which seems nearest an early realization is a road to tap the Clinchfield, Carolina & Ohio at Booneford, 45 miles from Asheville, with a line having Asheville as its ultimate destination. For the construction of this road, bisecting the county of Yancey, to Cane River postoffice on its western boundary, \$100,000 of bonds have been voted. Charles L. Ruffin of Johnson City, Tenn., formerly identified with the Carolina, Clinchfield & Ohio road, is general manager of the road, which is named the Black Mountain Railroad. Parties interested in the Clinchfield coal properties are said to be behind the enterprise. Final surveys are now being made, tools and machinery are being assembled at Booneford and Galax, and as soon as the weather will permit work will be commenced. It is proposed to have the road completed and in operation across Yancey county, a distance of 15 miles, during 1911.

To get into Asheville a line 22 miles long could be built to a connection with the Asheville & East Tennessee Railroad, now in operation between Asheville and Weaverville as an electric road, known as the Weaverville line. This is the property of R. S. Howland, who states that an understanding exists between himself and the Black Mountain Railroad officials that there will be co-operation in connecting up the two lines, when the electric road would be converted into a steam road. At present the Howland interests are building an eight-mile tramroad up Reems Creek to get out acid wood for tanneries and timber for sawmills. As developments progress the work of connecting up the Black Mountain road will be undertaken, so it is announced.

Besides bringing coal cheaply into Asheville and giving Asheville a very valuable outlet to the Northwest, this road would open up about 50,000 acres of virgin forest which would cut at least 8000 feet of hardwood to the acre. There would thus be tributary to the railroad the 12,000-acre Murchison tract, the 10,000-acre Big Ivy Timber Co. tract, the 20,000-acre Black Mountain Lumber Co. tract, the 5400-acre Johnston tract and the 3000-acre Ray tract, besides a number of cut-over tracts, all of which would yield a cut of considerably more than 400,000,000 feet. This 45-mile road would not only get all of this traffic, but probably as much again in spruce and chestnut pulpwood, to say nothing of the farm products, fruit, etc., present and to come. Its construction at an early day would therefore seem a requirement of present development, and it is thought probable that its completion would result in another big pulp mill being located in North Carolina, along the line of this road. Some pulp mill men are even down here now, going over the territory, some of the party being out on Ivy River, looking into the situation and conditions.

The most ambitious project on the tapis is that of Col. S. A. Jones of Waynesville, who has a charter for the Transcontinental Railroad, to be built with State aid and to be under State control. The route is from Knoxville to Waynesville, Canton, Asheville, Hendersonville, Rutherfordton and Gastonia, and thence will proceed in a direct line to the deep-water harbor of Southport, below Wilmington, N. C. Colonel Jones is a tireless worker, with unbounded enthusiasm in his undertaking, and he has many friends who share with him the belief that this 500-mile line is not

Railroad Projects for Western North Carolina.

[Special Correspondence Manufacturers Record.]

Asheville, N. C., December 22.

The demonstration by the Champion Fiber Co. at Canton, N. C., that paper pulp can be made from chestnut wood by the soda process, after extracting commercially valuable tannic acid from the wood, has given an entirely new value to the timber lands of Western North Carolina, among which chestnut is the predominating timber. There being a continually increasing demand for wood pulp, the attention of pulp makers, as well as tannic extract producers, has been attracted to the forest wealth of Western North Carolina as never before, with the result that numerous large tracts of the timber lands here have within recent years been taken over by extensive operators at prices ranging as high as \$25 an acre, whereas a dozen years or more ago the price ruled hardly higher than \$1.50, and farther back sales were made for as little as 50 cents an acre.

In those earlier days chestnut timber had no value at all. It was useless even for firewood. Only when its usefulness in making tannic extract became understood was it considered much better than a nuisance. Since it has been found that even fallen and half-decayed chestnut timber is valuable for the tannic acid, so much so that such wood sells for \$4 a cord, there has been a complete transformation in the situation.

Along with this activity has come a great agitation of new railroad projects. Some of these are revivals of long-discussed enterprises, but there has been renewed interest aroused in their feasibility because of the immediate necessity for added transportation facilities to take care of the traffic which timber operations on any extensive scale would create. Pulp and "acid wood" cannot be gotten out in the large quantities required without adequate transportation facilities. The plant at Canton consumes about 40 cars of wood a day, and if its capacity were to be enlarged two or three times, as report says the demand for pulp would justify, a very

considerable enlargement of transportation facilities would be required.

In the case of other large purchasers of timber tracts new lines will have to be built before operations can be commenced at all. Some of these operators have purchased only timber rights, with a time limit in which to cut off all timber above a specified diameter, and to these it is vitally essential that transportation be provided at an early day.

While the immediate occasion of the proposed roads is the local necessity for transportation facilities, the promoters of the railroad enterprises discussed have in view the ultimate construction of trunk-line roads, or feeders of trunk lines, which would give several new northwest-southeast railroads, bringing cheaper coal to the sections served, as well as providing new outlets at the sea for the products of the middle West and Northwest. Also there is in mind the necessity for transportation facilities for the opening up of nickel and iron-ore mines and other natural resources of the mountain region, and there is in view the additional permanent traffic to be gained by the settlement of lands when cleared and occupied by horticulturists, agriculturists and stock-raisers, and by the building up of industrial centers which cheap fuel and water-power, abundant raw materials and the attractions of a magnificent all-the-year climate would bring into being.

Altogether it would seem there is justification for the enthusiasm of those who believe Western North Carolina is now at the threshold of a notable development in every line, and out of this condition those who are behind the various proposed railroad projects believe numerous new transportation lines will be forced into being by the very exigencies of the case.

Though not all the projects may soon, if ever, reach realization, and some may fall into other hands before being carried through, it is a strangely significant fact that almost without exception the great

only feasible, but that the completion of the Panama Canal and the growth of the commerce of the country, and especially of the South, will necessitate the utilization of the 40-foot harbor of Southport and the construction of such another link between the Northwest and the South Atlantic seaboard.

Another project which would affect Asheville is the road W. J. Oliver of Knoxville proposes to extend from its present terminus at Sevierville, Tenn., via Asheville to Charleston, S. C. The line is in operation between Knoxville and Sevierville, a distance of 35 miles, and representatives of Mr. Oliver who have recently gone over the territory it would cover have announced that he is arranging his affairs so that he may give energetic attention to the line as projected, with the determination to push it to completion.

At the southern end of the line there is some activity manifested in the proposed Greenville and Knoxville road. The Candler of Atlanta are interested in this project. Transylvania county, North Carolina, has voted \$100,000 of bonds in aid of the

enterprise. One suggestion is that the road might be built to a connection with the Oliver road at Canton.

Renewed interest is being manifested in the Appalachian Interurban Railroad project, fostered by local and other interests, and which has been the victim of financial conditions in the country at times heretofore. One sale of the rights and surveys was all but closed up when the panic of 1907 swept over the land. Negotiations are now being made with substantial railroad interests in the North, and it is the expectation of local parties in interest that this deal will go through. The road would run from Rutherfordton up Reedy Patch to Hendersonville, and from there come to Asheville, with a line to Canton and Waynesville.

For an interurban electric line, originated through local enterprise, New York money is said to have been secured on a pledge to complete the road within two years' time. The route of the line would be from Charlotte to Shelby, to Rutherfordton, and thence through Hickory Nut Gap to Fairview, and thence to Biltmore

and Asheville. Along the route is the famous and most picturesque Chimney Rock country, with its lofty waterfalls, mysterious pools, Old Quaking Bald Mountain, showing Esmerelda's cabin and the Old Man's face, and a long stretch of most picturesque territory accessible now only by wagon roads. It is believed by the promoters that there would be summer tourist excursion business on this road sufficient in itself to make it pay.

ALBERT PHENIS.

Congress of Refrigeration.

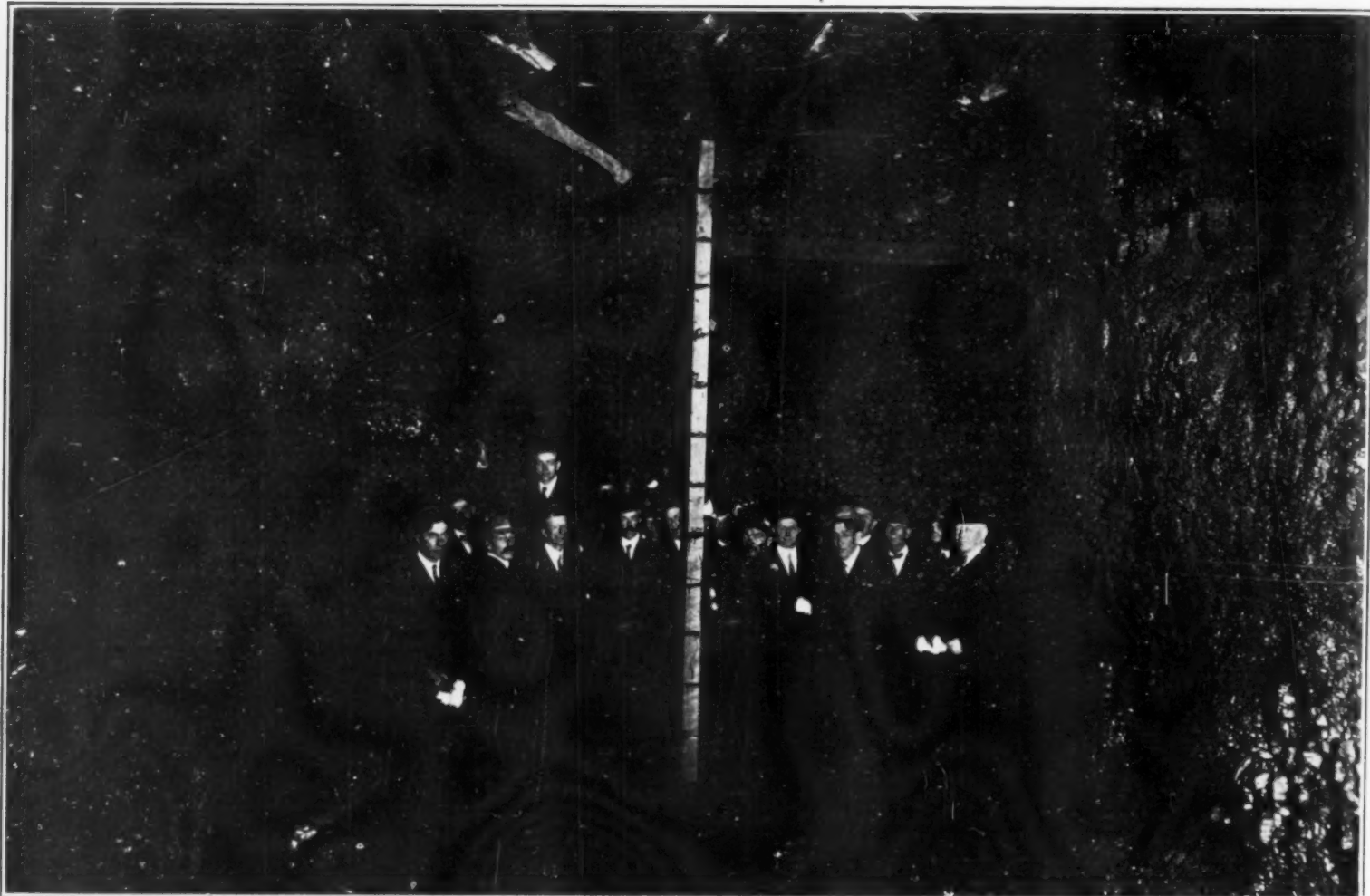
The executive committee of the American Association of Refrigeration held a meeting at Chicago on December 15 to perfect an organization and provide ways and means for the Third International Congress which the recent Second Congress in Vienna voted shall be held in the United States. Several members of the committee came from widely-separated sections of the country. Chairman Homer McDaniel of Cleveland was authorized to appoint a committee of five to prepare a budget of the necessary expenditures for conducting the

congress, to decide upon the most suitable date and place for holding it, to prepare a general scheme of entertainment for the foreign delegates, and to report the results of their labors to the next regular meeting of the association. Those present subscribed \$7000 toward a guarantee fund, the amount of which is to be determined by the committee appointed. It was the general opinion of those present that the committee will without difficulty secure a sufficient fund to justify our Government in extending its invitation to foreign countries to participate in the congress by the appointment of official delegates, as was done by our Government for the Paris Congress of 1908 and the Vienna Congress of this year.

Commercial Organization Wants Secretary.

The Board of Trade, Norton, Va., is ready to engage a competent man as its commercial secretary. References are required, and applications can be addressed to Charles Hall, Jr., at Norton.

A THIRTEEN-FOOT SEAM OF COAL IN THE BIRMINGHAM DISTRICT.



It is claimed by those who knew him best, and are sufficiently well informed as to the coal resources of the State of Alabama, that the recently-opened "Acmar" mines constitute the acme of perfection in the pioneering career of H. F. De Bardeleben, who recently died in Birmingham. The accompanying cut will give one some idea of the magnitude of the seam of coal just opened at Acmar by the Alabama Fuel & Iron Co. This mine is located in the Cahaba field, about 24 miles from Birmingham, on a spur leading from the main line of the Central of Georgia Railroad Co. The coal has a pitch of about 14 degrees. The cut shows the interior of the mine, and the spaces between the dark cross-marks on the pole extending from the bottom of the mine to the slate roof represent one foot each. The opening contains a 13-foot seam of coal, with only a 10-inch parting. The field has been thoroughly prospected with a diamond drill, and the seam proven of uniform thickness over an area of two by three-quarters of a mile. The tonnage estimated is about 35,000,000 tons. The depth of the mine at present is about 500 feet, and while driving the slope and narrow work an average of 150 tons of coal per day was produced.

A contract has been let to the American Concentrator Co. of Joplin, Mo., to install the largest coal-washing plant in the South. It will cost more than \$100,000, will be of reinforced concrete construction, and will represent a capacity of something like 3500 tons per day. It will be built in units, with the idea of increasing the units from time to time as conditions warrant. The washer plant will be located at a convenient and strategic point between the present Margaret mines of the company and Acmar for the purpose of washing coal from both mines at the central plant. At present the Margaret mines are producing 1500 tons of coal per day.

During the latter months of the life of Colonel De Bardeleben his entire time and best energies were spent in the exploiting of the present field and bringing to a feasible conclusion plans whereby the possibilities of this section of the Cahaba field will add greatly to Alabama's coal production, and to the knowledge of Alabama's natural resources. The Colonel was untiring in his efforts, and while quite feeble in his latter days would shoulder a pick and blaze the way for his little squad of prospectors, remaining in the field for days and nights, thus subjecting himself to the great discomforts and exposure incident to such work. It was while about his work at Acmar that he received the stroke of his last illness, from which he only survived a few days. Colonel De Bardeleben entered the Birmingham district in the early 80s, and from the beginning was a potent factor in its iron, steel and coal industries, and while his work in this direction is seen on every hand today, it is safe to say that the opening of Acmar was his greatest and biggest achievement.

HIGHWAY ON THE APPALACHIANS' CREST.

[Special Correspondence Manufacturers Record.]

Raleigh, N. C., December 24.

The good-roads movement is a live issue in North Carolina. There are some 25 or 30 good-roads associations in the various counties of the State, and several are being added every week in the year. Also, there are other associations organized to carry out some specific stretch of roadway, and the State is giving aid and assistance in every way it can. Furthermore, there are

has been surveyed and a profile and plan has been prepared. A preliminary survey has been made of the balance of the route, so that the location of the road is pretty well known.

Briefly, the outline of the Crest of the Blue Ridge Highway, as described by Dr. Joseph Hyde Pratt, State geologist of North Carolina, is as follows:

Starting from some point on the Nor-

Railway. From near White Top the route would be through Ashe county, North Carolina, via Beaver Creek and Elk Cross-Roads to Boone, Watauga county, North Carolina. From Boone to Blowing Rock the road is well graded, and, with a small amount per mile spent for surfacing with sand-clay or gravel, this part of the road will be in very good condition. From Blowing Rock to Linville, a distance of 20 miles, the road is also well graded. This road from Boone to Linville will practically need no relocation. From Linville to Linville Falls, via Pineola and Grass-

the road will be entirely a new one; the survey has been carefully made and the road opens up some beautiful country. Altapass is the highest point on the Clinchfield Railway, and is already being developed as a resort. From Altapass the road is via Gillespie's Gap to Switzerland, a new resort that has been started within the last two years; Gooch Gap, Buck Creek Gap, Toe River Gap, Steps Gap, which will be the highest point of the highway, where it reaches an altitude of approximately 5500 feet. From Steps Gap the road is via Balsam Gap, Bull Gap to



GLENBURNIE-MONTREAT SAND CLAY ROAD NEAR ASHEVILLE.

a number of projects under way for improvements altogether out of the ordinary, and one of them, the "Crest of the Blue Ridge Highway," will be nothing short of the premier scenic highway of the world. It will be built along the backbone of the Blue Ridge Mountains from somewhere near Marion, Va., down through North Carolina, making accessible all the lofty peaks of the "Land of the Sky" and connecting at its southern end with the Washington-to-Atlanta national highway. This road, when completed, would soon become one of the greatest attractions of the United States, for, winding at times along heights of 5000 feet and more, with rugged mountain views at every turn, it would rank in interest with the Palisades of the Hudson, Crawford Notch of New Hampshire, the Yellowstone Park of Montana, and even with the Yosemite Valley of California or the Grand Canyon of Arizona.

The section of the Southern Appalachian Mountains through which the crest of the Blue Ridge Highway will pass contains the loftiest peaks east of the Rock Mountains, with mountain slopes covered with a more varied fauna and flora than is found in any other section of this country. The grandeur of the scenery along this highway, comprising, as it will, extensive views into the Piedmont region, nearer views of deep valleys and mountain tops and ridges, with here and there a most attractive and beautiful waterfall and streams of clear crystal water, and penetrating the dense evergreen forests, whose deep shadows will weave a spell of fascination over the traveler as he passes through them, will make a ride over this highway one never to be forgotten.

The whole scheme for the construction of this highway has been carefully thought out, and a considerable portion of the route



ST. DUNSTAN'S ROAD NEAR ASHEVILLE.

folk & Western Railway, as Marion, Va., the road would be constructed so as to pass close to White Top Mountain, which is a celebrated mountain in Southwest Virginia adjacent to the Norfolk & Western

land, the present road can be used to a certain extent, but a considerable portion of it will have to be relocated on account of the grade. From Linville Falls to Altapass, a station on the Clinchfield Railway,

Asheville. From Buck Creek Gap to Bull Gap the highway is twining around through the most rugged portion of the Southern Appalachian Mountains, namely, Black and Great Craggy Mountains. At Steps Gap the road is then only a short distance from the top of Mt. Mitchell, and a side road can readily be built to the summit. The road has branched off from the top of the Blue Ridge over Toe River Gap, in order to open up this important mountain section of North Carolina. Another road, however, is to follow the crest of the Blue Ridge to the east of the Pinnacle (Mountain) to Swannanoa Gap, Black Mountain to Hickory Nut Gap, to Bat Cove, to Hendersonville, where it will join the other road coming from Asheville to Hendersonville. At this point there will be another division, one road still following near the summit of the Blue Ridge to Brevard, Toxaway, Sapphire, Fairview, Highlands, Raven Gap, Tallulah Falls, Clarksville, and on to Atlanta. The other route will be from Hendersonville via Zirconia, Green River, N. C.; Greenville, S. C., where it will join the National Highway from New York to Atlanta. At Asheville is also being planned a continuation of the road via Weaverville, Mars Hill, Hot Springs, N. C.; Newport and Dandridge, Tenn., to Knoxville.

The hardest part of this highway to construct will be that from Altapass through the Black and Craggy Mountains, as this is through a wild, very sparsely-settled country, but when completed will be one of the best advertising features of the whole Southern Appalachian region, and will probably attract more attention to this region than anything else that has been contemplated. It will make Mt. Mitchell accessible to practically everyone who wishes to ascend the summit of this moun-

tain, and Mt. Mitchell will become as famous and as well known in connection with the Southern Appalachian Mountains as Pike's Peak is with Colorado and Mt. Washington is with New Hampshire. With the highways leading to this road from Tennessee, Georgia, South Carolina, North Carolina and Virginia, there will undoubtedly be an enormous amount of travel both by automobile and coach over this road.

The natural sequence of the construction of this highway will be that here will be scattered all along the route beautiful and attractive inns, where the traveler will find the very best accommodations, which will permit him to spend a week or more enjoying the views which will surround each and every such inn. Already such inns are being constructed, as the Esequola Inn at Linville, the new inns at Altapass and Switzerland, and those in the sapphire region.

The enterprise should prove a good financial investment not only to the State, on account of the money which tourists will leave in the territory, but a financial success to the companies operating these portions of the highway that it is necessary to make toll roads, on account of the large number of automobiles and teams that would pass over the road.

It is proposed that the maximum grade shall be no more than 4½ per cent. At some places it would cost \$5000 a mile to do the grading. On all State work the officials are working for a 40-foot right of way, so that roads may have a width of 30 feet.

Other projected highways which are being promoted by the North Carolina Geological and Economic Survey and various good roads associations are as follows:

Capital to Capital Route.—This route is interstate, extending from Richmond, Va., via Raleigh, N. C., to Columbia, S. C., to Atlanta, Ga. The route across North Carolina will be either via Pleasant Hill, Roanoke Rapids, Littleton, Warrenton, Henderson, Kittrell, Franklinton, Wake Forest to Raleigh, or via Clarksville, Va., to Soudan, N. C.; Oxford, Providence, Stem, Durham, to Raleigh, and then via Apex, Bonsal, Jonesboro, Cameron, Vass, Southern Pines, Pinehurst, Jackson Springs, Ellerbe, Rockingham, Hamlet, Osborne to Cheraw, S. C.

National Highway.—This highway, which extends from New York to Atlanta, follows in North Carolina the following route: Ridgeway, Va., via Price, N. C.; Stoneville, Madison, Ellisboro, Stokesdale, Kernersville, Winston-Salem, Lexington, Salisbury, China Grove, Landis, Concord, Newell, Charlotte, Belmont, McAdenville, Lowell, Gastonia, Bessemer City, Kings Mountain, Grover to Blacksburg, S. C.

Charlotte-Asheville-Knoxville Highway. As far as Kings Mountain this highway follows the National Highway just referred to. At Kings Mountain the highway goes via Cherryville, Shelby, Blantons Mill, Mooresboro, Forest City, Rutherfordton, Green Hill, Bat Cave, Chimney Rock, Fairview, Biltmore, Asheville, Weaver-ville, Mars Hill, Hot Springs, Paint Rock to Newport, Tenn.

Salisbury-Asheville Highway.—This highway follows the National Highway as far as Landis, then it turns west, going via Mooresville, Brown's Store, Shuford Gold Mine, Newton, Conover, Hickory, Connelly Springs, Morganton, Marion, Old Fort, Swannanoa Gap, Black Mountain, Swannanoa to Asheville. At Hickory another highway will branch north via Granite Falls, Lenoir, Patterson to Blowing Rock, where it will connect with the crest of the Blue Ridge Highway.

Charlotte-Wilmington Highway.—The exact route of this highway has not yet been definitely determined, but will prob-



DRIVE AT TOP OF BEAUCATCHER MOUNTAIN.

ably be via Sardis, Matthews, Monroe, Wadesboro, Rockingham, Hamlet, Laurinburg, Maxton, Lumberton, Boardman, Chadbourn, Whiteville, Lake Waccamaw and Wilmington. It is possible that the route from Lumberton to Wilmington may be via Clarkton, Bladen county.

Triangular Highway.—Considerable interest is being taken in a triangular highway, extending from Pinehurst to Raleigh as the first leg of the triangle; Raleigh to Winston-Salem as the second leg of the triangle, via West Raleigh, East Durham, Durham, Chapel Hill, White Cross, Saxapahaw, Graham, Burlington, Elon College, Gibsonville, Greensboro, Guilford Battleground, Oak Ridge, Kernersville to Winston-Salem; then Winston-Salem to Pinehurst as the third leg of the triangle, via High Point, Asheboro, Dewey, Steeds, Biscoe, Candor, Eagle's Springs and West End. There is also a first-class road connecting Greensboro with High Point, and thus making, if desired, the third leg of the triangle, Greensboro to Pinehurst.

A number of new bills will be introduced in the Legislature of 1911 affecting the good roads movement and aimed to facilitate the building of roads. There are 4000 miles of good roads in the State now, and they are being added to at the rate of a mile a day or more. But as there are 48,000 miles of public roads in North Carolina, there is a vast amount of work yet to be done before even the main thoroughfares are all put in the best condition.

One of the bills to be introduced will provide for the creation of a North Carolina Highway Department, to consist of a highway commission and highway engineer, which would have supervision of highway construction, giving expert advice and assistance free in the construction and maintenance of good roads.

Another bill would provide that County Commissioners be authorized and instructed to issue bonds for good road construction when petitioned to do so by a majority of the qualified voters of the county—simply on petition and without the necessity of an election.

Another bill will provide for the State to issue bonds to cover county issues up to a certain amount in aid of good roads. This is proposed because the State can borrow money around 4 per cent., while the county would have to pay 5. A novel feature of this plan, which was worked out by Mr. W. S. Wilson in the Secretary of State's office, is that the county would pay the State 5 per cent., and that would take care of principal and interest in 40 years, so the county would be obligated to pay nothing more than the 5 per cent. interest it would have to pay anyhow on a county issue if unaided by the State, and would be entirely relieved of the principal it would

otherwise have to pay. Under this plan all roads would be constructed and maintained under the direction of the State highway commission and engineer.

Another proposed law would give the State highway commission and engineer the use of State convicts, some 800 in number, to supplement the work of county convicts in good roads construction.

It is also proposed to put a tax on all vehicles that use the public roads, narrow tires as well as autos, for the maintenance of public highways.

These provisions, in addition to the system at present in force, would, it is felt by the good roads officials, give North Carolina one of the greatest and most effective good roads systems possible to obtain.

In the last five years about \$6,000,000 has been spent in money and labor on public roads in North Carolina, and expenditures now foot up about \$1,500,000 a year. It is declared that with State supervision from \$300,000 to \$400,000 a year could be saved out of this sum.

It is of interest to note the adaptability of methods to means and conditions which is being adopted. In some parts of the State, particularly in the east, where stone is scarce, but also in the west, where the population is sparse, an expensive road is not feasible, sand-clay roads are being built with marked success. There is a binder in the clay, which, when mixed with sand in proper proportions of about 3 to 1, makes a very serviceable and lasting road, adapted both for teams and automobiles, at an expense for construction of no more than \$300 or \$400 a mile. In the mountain and Piedmont regions macadam is the type of road most generally adopted, but even there conditions frequently warrant the use of sand-clay roads instead.

Altogether it is very evident that North Carolina is in the very front line of the progressive States of the Union which are alive to the importance of a comprehensive system of good roads construction.

ALBERT PHENIS.

COMMERCIAL MOTOR CARS.

Exhibition of Such Power Vehicles to Be Held at Chicago.

A comprehensive display of motor trucks, delivery wagons and self-propelled road machines for all sorts of industrial purposes is to be held in Chicago during the week of February 6 to 11, inclusive, 1911. It will follow immediately after the annual automobile show in the Coliseum, and will be conducted by the same management under the auspices of the National Association of Automobile Manufacturers.

It is estimated that upward of 200 different models of work vehicles will be displayed, representing a value of more than \$500,000. In addition, the gallery and

second floor of the Annex will be filled with 150 industrial displays of parts, fittings and supplies pertaining to the motor car.

Power vehicles suitable for almost every kind of industrial and commercial business will be shown, from parcels carriers for quick delivery service to ponderous motor trucks of five tons load capacity and over. Special forms for unusual purposes will be displayed, such as chemical and hose carts for fire fighting; trucks with power winches operated by the same motor that propels the vehicle; trucks with self-dumping bodies; self-discharging coal trucks; patrol wagons, ambulances, sight-seeing cars and motor stages.

This exhibition of the business motor car will be the exponent of an industry that is as old as the pleasure car business, and one that has grown to surprising proportions, having more than 100 concerns actually manufacturing for the market, and a potential strength of 300 builders, with a possible productive capacity of 15,000 or more vehicles annually.

Thousands of motor trucks and delivery wagons are now in daily service and are doing the work more quickly and more economically than it can probably be done in any other way. The forthcoming show offers an excellent opportunity for the business man to get posted on just what these machines are accomplishing, how they have been improved in recent year and how they are helping their users to build up trade. At the show, where the various makes are gathered together under one roof, each can be readily compared with others, and the representatives from the factories who have made a study of trucking and delivery problems as they have a bearing on the motor vehicle can be interviewed and a thorough understanding of the whole subject attained.

A visit to this show will well repay anyone, for the commercial motor vehicle represents a new form of transportation that cannot be ignored by the enterprising business man, as it is a combined road vehicle and portable power plant.

There is hardly a line of trade or industry to which the motor truck, delivery wagon or one of the special forms of self-propelled vehicles has not been or cannot be adapted with gratifying results. By its celerity and tremendous work capacity, and its non-fatigue characteristic, the motor vehicle is quickening the pulse of trade, and a new business era will be ushered in with its advent.

Peanut-Fed Hams.

The use of peanuts for fattening hogs is not generally understood outside of the peanut-growing district of Virginia. In that section it is well known that peanuts are an exceptionally fine foodstuff for hogs, and Wm. J. Gray of Suffolk, Va., and others have organized the Virginia Peanut Fed Ham Co., and have secured a fireproof plant erected at a cost of \$20,000 for the purpose of meat-packing. Mr. Gray writes the MANUFACTURERS RECORD that the company is now in the market for 40,000 green hams. Possible in the near future Suffolk peanut-fed hams will be as well known as the Smithfield hams, which have made a world reputation.

Winston-Salem.

The Board of Trade of Winston-Salem, N. C., Mr. J. S. Kuykendall, secretary, has just issued a directory of its membership, showing a remarkable increase in numbers from 168 on October 1 to 600 on December 15 of this year. The directory of more than 26 pages classifies by business or occupation every member of the Board of Trade, and it is stated that a second edition to be published next month will carry 100 additional names.

ALABAMA'S COAL OUTPUT.

Production in 1910 Estimated to Be at Least 15,000,000 Tons.

[Special Cor. Manufacturers Record.]
Birmingham, Ala., December 26.

Indications now point to the fact that Alabama will hold fifth place in the list of coal-producing States for the year 1910. Last year she occupied sixth place, producing 13,790,268 net tons. At the present rate, and the rate pursued during the past summer months, it would seem that she will eclipse last year's figures by at least 1,500,000 to 2,000,000 tons. There are some good causes for this ratio of advancement, and they might be classed under the head of normal and abnormal causes. To the list of normal causes has been added this year the supply of Alabama coal to some of the important steamship companies of the country which heretofore drew on the Pennsylvania and middle Western coal fields alone for their supply of fuel.

Take, for instance, the Ocean Steamship Co., whose boats render service between Savannah and New York and Savannah and Boston. This company heretofore coaled its ships at two Northern ports only. It would seem that these conditions obtained from the fact that it was considered there was nothing in the way of coals down South suitable for steamship coaling purposes. At least, this was the general impression. Today one of our large coal-producing companies is supplying this steamship line with its entire fuel, which means upward of 100,000 tons per annum. Another important factor bearing on Alabama's coal production is that there has come to this district a demand for 150,000 tons per year through the ports at New Orleans, which demand heretofore has been supplied by the Pittsburg district. The opening up of this New Orleans steamboat and steamship trade has been made possible by the installing of proper loading and handling facilities in New Orleans by a subsidiary company of the largest independent coal-producing company in the South. Including land, dock room, equipment, etc.—in the way of tugs, barges, bins and loading devices—an expenditure of \$500,000 is represented. The United Steamship Co.'s needs are partly taken care of in this way from the Alabama fields. In addition to these dock facilities the coal company has added new and effective equipment at its mines in this district in order to be able to market its coal in a most satisfactory manner. By the exercise of due forethought and the expending of a considerable amount of money they have put themselves in shape to handle the business, and worked themselves into a new channel of trade that will go a long way in creating a ready demand for the output of the mines during times when local conditions are not quite so favorable.

This fact is most forcibly demonstrated when one considers that during the past year the pig-iron market has been in a depressed state, and, comparatively speaking, production has been materially curtailed. This means that coke ovens have been out of commission, thereby forcing coal on the open market. At the present time practically half of the coke ovens in the district are out of commission. In former years when similar conditions existed operations at the coal mines suffered severely on this account, and production had to be cut down to meet the local conditions. It is safe to say that for the past 90 days the demand for coal has been greater than the supply. Of course, this is brought about partly by abnormal causes, such as the stocking of steam coals by manufacturing concerns in anticipation of troubles incident to the holidays. For the past 60 days the Alabama coal operators have been

shipping coal into New Orleans to supply the deficit on orders of the Pittsburg coal companies—due to their inability to float their coal down the Ohio River. Conditions point to the fact that this trouble will extend far into the winter months of next year; hence Alabama coal will be sought to fill this shortage. As a whole, the condition of the coal market has been better the past year than at any time since 1906 and 1907, though the average price per ton has not been as high as the two above-mentioned years showed. This is a fact, however, mostly due to the operators not fully appreciating what present conditions have demonstrated. Had they foreseen what transpired from month to month during the summer, the average price for summer coal could just as easily have been 10 to 15 cents per ton higher, thus bringing the year's average well up to that of 1906 and 1907. Thus the facts recited above show that Alabama has swung into the list of newly-acquired business—heretofore that has gone elsewhere—at least 250,000 to 300,000 tons of coal per annum during the year 1910.

Under the head of abnormal conditions it is conservative to say that Alabama coal operators owe much to the opportunity that came to them during the recent strike and trouble in the Middle Western coal fields. Alabama coal, on account of these conditions, was placed at points that had heretofore never used it. It is conservative to say that while the above-named conditions existed at least 2500 tons of Alabama coal per day was moved from the district to take care of the calls from points depending on the Middle Western fields, and today a good tonnage is moving in that direction. Whatever skepticism that may have existed heretofore in regard to the quality of Alabama coal has been removed by the test that was given it.

Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., December 26.

Practically nothing was accomplished in the way of pig-iron sales the past week. More attention was paid to preparation for Christmas and the holidays. Several of the furnaces, as well as other manufacturing plants in the district, closed down for the holidays in order to make needed repairs and give their employees a rest. Trading in coal was exceedingly brisk, both on account of the scarcity of this fuel and the manufacturers' desire to have a sufficient stock on hand to tide him over the holidays. Pig-iron is quoted at \$11 and \$11.50 per ton at the furnace for prompt, nearby and first and second quarter deliveries.

The manufacturers of water and gas pipe are busy preparing for inventory time. Prices are unchanged, and as follows per net ton f. o. b. cars here: Four to six-inch, \$19; 6 to 8-inch, \$18; 8 to 12-inch, average of \$17, with \$1 a ton extra for gaspipe.

The scrap-iron market is only a nominal one, and, in the absence of sufficient inquiries to test the strength of same, following prices are quoted per gross ton f. o. b. cars here:

Old iron rails, \$13.75 to \$14.25.
Old steel rails, \$11.50 to \$12.
Old iron axles, \$16.50 to \$17.
Old steel axles, \$15.50 to \$16.
No. 1 railroad wrought, \$11 to \$11.50.
No. 2 railroad wrought, \$10.50 to \$11.
No. 1 machinery, \$10 to \$10.50.
No. 1 steel, \$9.50 to \$10.
Old standard car wheels, \$12 to \$12.50.
Light castings, stove plate, \$8.50 to \$9.

Mr. W. A. Green, who for the past few years has been Southern manager of the Republic Iron & Steel Co., has left his post here to become comptroller of the Texas Oil Co. at Houston, Tex. Mr. C.

T. Fairbairn, his successor, has been installed.

Mr. J. H. Hoadley, president of the Alabama Consolidated Coal & Iron Co., is spending the holidays in the city, and while here it is understood he will discuss certain plans of development with the local officials in charge of operations. Mr. Hoadley expresses himself as being hopeful of the near future of pig-iron and general business conditions. During this week he will make a tour of the properties of the company, as is his usual custom on his trips South.

ATTRACTING MEN AND MONEY.

Mineral and Agricultural Development in Kansas City Southern Field.

Mr. W. C. B. Allen, the former geologist of the Kansas City Southern Railway Co., has been transferred to Mena, Ark., as general agent of the company in Western Arkansas to succeed Mr. G. B. Wood, promoted to assistant general freight agent at Texarkana. Referring to matters of progress coming to the attention of the industrial department, Mr. Allen informs a representative of the MANUFACTURERS RECORD that the South is attracting more settlers and investors of a better class than heretofore, and that probably 40,000 people had been added to the territory adjacent to this line during the past year. The new settlers are giving more attention to clearing off the old fields; are plowing the soil deeper and cultivating the fields more frequently during the growing season; are using more fertilizers and introducing better seeds and a greater variety of crops and recognizing the necessity of rotation of crops, the plowing under of cowpeas, clover, etc., to restore the old cotton fields. As a result more corn, cotton, cowpeas, peanuts, alfalfa, hay, live-stock and garden truck are being produced on the same amount of farm lands. For instance, in Mena, Polk county, Arkansas, the cotton yield is more than double that of a year ago, amounting to over 4000 bales shipped, against 1946 last year. Fruit culture is gaining rapidly in some localities, especially strawberries, peaches, apples, etc. One peach orchard at Horatio, Ark., belonging to the Southern Orchard Co., has upward of 30,000 trees in bearing and ship about 415 carloads of peaches to Northern markets this season. Pecan trees are being planted between the rows, and certain crops are cultivated in the meantime, while the younger trees are growing. One apple orchard at Lanagan, Mo., was saved from frost by using 4000 small oil stoves during the cold nights of last April, and as a result the owner, Mr. Dolson, saved about 35,000 barrels of apples, worth \$3.50 to \$4 per barrel, while adjoining fruit trees were destroyed. Thousands of acres of new orchards and berries are being planted along this road between Kansas City and Port Arthur, as well as many truck farms opened for supplying Northern markets with the early fruits and vegetables. These products begin in January on the Gulf coast, and in some instances run through each month until December, and the climate affords a constant succession of crops.

"From the frozen North to the Sunny South" is the banner the immigrant wagon bears today, instead of the old sign, "Pike's Peak or Bust."

In the development of the mineral resources of this line it is stated that the Pittsburg (Kans.) Chamber of Commerce is arranging to finance the erection of rolling mills for the manufacture of angle and bar iron, etc., this point being situated in the great Cherokee-Pittsburg coal, oil and gas districts of Kansas, affording cheap fuel supplies.

At Joplin a new impetus has been given

to the zinc and lead mining industry by a general concerted movement in the direction of deep mining, and many old workings and abandoned shafts are being sunk below the 300 levels with excellent results. The ores are found disseminated through the mineral-bearing rocks, instead of in "pockets" and "sheets," which occur near the surface. Mr. Allen and other practical mining men predict a long and prosperous future for the mining districts of Southwest Missouri and the adjoining region. The output of lead and zinc from these districts ranges from \$14,000,000 to \$16,000,000 in value annually, and the field seems to be inexhaustible by deep mining, as the source of origin of the vast mineral deposits appears to come from the depths.

In Eastern Oklahoma at Marble City, 281 miles south of Kansas City, and about one-half mile west of the Kansas City Southern Railway Co.'s main line, is a deposit of gray and pink marble known as the Ozark marble quarries, formerly belonging to the Ozark Marble Co., but recently acquired by the Western Marble Co., of which Mr. Ralph Taylor, vice-president of the Wm. Miller & Sons Construction Co. of Pittsburg, Pa., with his associates, are leading stockholders. These marble quarries are equipped with a mill and machinery for quarrying and sawing the marble for the Western and Southern trade, and considerable contracts have been secured for marble to be used in exterior as well as interior work on public buildings. A large number of public buildings in Oklahoma, Missouri, Arkansas, Texas and Louisiana are to be supplied with this Ozark marble. Both the State and Government building contractors are now figuring on this marble, and it is expected to be delivered to New York, Philadelphia and the Eastern coast cities via Port Arthur and the water lines, in competition with other building materials. Prof. C. N. Gould, State Geologist of Oklahoma, estimated this marble deposit to contain upward of 10,000,000,000 cubic yards, and this will afford considerable new tonnage to the Port Arthur route.

The Arkansas slate fields near Mena are being opened by several slate companies, which are just beginning the preliminary work of stripping the surface and opening the quarries to be ready for shipment when a railroad line is built through that section from Mena to Hot Springs. The American Slate Co. has recently built a wagon road to the mill site and quarries, and is working two of its quarries and has hauled most of the machinery from Mena for the proposed mill. The National Slate Co. of Kansas City and Titusville, Pa., has consolidated with the Mid-Continent Slate Co. and has secured new capital in Pennsylvania and is now doing the preparatory work of opening one or more quarries. Other companies have secured large holdings in this new slate field for roofing, electrical supplies, billiard tables and school purposes will come from the Mena slate fields in the future. This slate field offers a rare opportunity for investment in the cheap lands covering this vast deposit for fully 40 miles in Polk and Montgomery counties. The varieties of red, purple, gray, black and green-colored slates lie in strata having a dip of 45 to 50 per cent., with a thickness of 200 to 400 feet, and are found to exist in parallel zones or dykes running easterly and westerly for many miles. The tonnage existing in a crude form amounts to millions of carloads, and will not be exhausted in hundreds of years.

The chalk cliffs of Southern Arkansas, located about seven miles from Ashdown, on the Kansas City Southern Railway, are an immense deposit of carbonate of lime, valuable for the manufacture of Portland cement, burnt lime and ground

lime for use in correcting the acidity in soils, and is also now being utilized by one or two commercial fertilizer works at Shreveport as a filler or dryer in connection with other fertilizing materials. This carbonate of lime is desirable in sour or heavy clay soils, and is recommended to farmers and planters in preparing the old cotton fields for planting leguminous crops, such as cowpeas, peanuts, clovers, alfalfa, etc. Lime is considered one of the best means of sweetening the soil available, and is now being introduced along the Kansas City Southern Railway.

Hundreds of millions of tons of this carbonate of lime, together with vast deposits of marls, gypsum, kaolin, fire-clay, pottery clay, glass sands, lignite coal, as well as a large variety of minerals, such as lead, zinc, copper, antimony, manganese, brown hematite iron ore, oil and gas, asphaltum, semi-anthracite and bituminous coal are found in Western Arkansas and Louisiana and in Eastern Oklahoma and Texas, tributary to the Kansas City Southern Railway, and the future growth of business and the industrial progress of the South may be expected to develop with the unfolding of these new deposits and raw materials for building up manufacturing cities and supplying the world's commerce from Gulf ports when the Panama Canal is completed. The Kansas City Southern Railway Co. is now expending from \$8,000,000 to \$10,000,000 in rebuilding its line, cutting down curves and grades, to be in readiness to handle the future traffic between the great empire of the Mississippi and Missouri River valleys and the Gulf export points reached by vessels to the countries which look upon the waters of the Atlantic and Pacific oceans.

BALTIMORE COPPER SMELTING.

Enlargements of Operations Under Way and Contemplated.

The American Smelting & Refining Co. of New York, in a letter to the MANUFACTURERS RECORD says:

"Since the American Smelters Securities Co. took over the business of the Baltimore company some three years ago the capacity of the plant has been enlarged steadily as new business came along, and in several departments new construction is now going on and has been going on for several months past in connection with many improvements and economies which will result in doubling the capacity of the plant. These changes will have been completed in the course of the next two or three months. The Baltimore plant is splendidly located for business, and the New York management finds Baltimore to compare most favorably with any point at which any one of its plants is located, in that the best class of labor is obtainable there, and there are such unusual facilities in the handling of products. The introduction of power from the Susquehanna River is also of the greatest advantage, and, speaking broadly, it is altogether likely that, as the copper refining business of the American Smelting & Refining Co. and the American Smelters Securities Co. develops, the business will be confined to the Baltimore plant. It is altogether probable that this business, which is a steadily-growing one for our companies, will cause further enlargement of the Baltimore plant, but as to when this will be done I am not prepared at the present time to say."

The Texas Orchard Development Co., incorporated with a capital of \$1,500,000, will develop for the growing of citrus fruits and figs the Rowan ranch of 30,000 acres on Chocolate Bayou, in Brazoria county, Texas.



A HANDSOME VIADUCT.

Southern Railway's Double Track Reinforced Concrete Bridge at Asheville.

The Southern Railway's new double track reinforced concrete viaduct across the French Broad River at Asheville, N. C., which was completed during the year now closing, is one of the handsomest structures on the system, as the accompanying illustration shows.

From a technical description the following data is taken: It is a reinforced continuous girder bridge 733 feet 10 inches long, resting on two abutments and 21 piers. The spans are 30 feet in the clear between piers. Beginning at either end, the first two piers are three feet thick at the top. The third pier is four feet thick, and every fourth pier is four feet thick at the top. The foundations are all carried down well into the solid rock, and they average about three feet below the ordinary rock bed of the river. The forms and centering were left intact under and around each span for three weeks, and the concrete for each span was finished in one operation, that is, without cessation of work. Six forms were placed in position and the steel reinforcement all placed and wired in its true position before any concreting was done; then five spans were concreted. When the first three had set for 20 days the forms were removed and carried ahead and the operation repeated. To save time three additional forms were used, which reduced the time to about one week for each span.

The piers were molded in forms five feet high, resting one on top of the other. They were wired through the piers and bolted together on the outside, and were easy to remove and use over again. The piers and abutments for the entire bridge were completed up to the spring line elevation before the girder and floor systems were started. The girders are continuous for the entire length of the structure. On each pier at the spring line an expansion joint is left by placing on top of the piers two thicknesses of ordinary tar paper, and a two-inch expansion at each end of the girders against the abutments. The alignment is straight and the grade level. The under side of girders is eight feet above extreme high water.

The bridge was designed and erected under the supervision and direction of W. H. Wells, chief engineer of construction.

In Kentucky Oil Fields.

[Special Cor. Manufacturers Record.]

Barbourville, Ky., December 26.

Much Northern and Eastern capital is now being expended in oil and gas developments in a heretofore undrilled area of

Western Kentucky embracing a string of counties extending from the Ohio River to the Tennessee border.

Tests thus far have revealed little definite, but the winter season will witness widespread developments along new lines, and the Kentucky petroleum map may be altered as a result of developments under way and drilling planned.

In the upper tier of counties adjoining Illinois and Indiana a large number of leases have been held for over a year by Northern operators, and these will be tried out for oil and gas. The trend of developments in Illinois and Indiana has been southward, and owners of leases in the counties of this State bordering the Ohio believe the oil-producing sands of the States named may be proven to extend into Kentucky. A number of drills will be put to work in the near future to try out this theory.

In Webster and Hopkins counties some test drilling is under way. The deepest well in Western Kentucky is in process of drilling in Webster. A depth of 1400 feet has been reached, and the drill will be taken several hundred feet deeper as a search of the deep formations. An oil sand was found below 1000 feet, but was dry. The work is being done by Illinois operators.

In Warren county, not far from the Tennessee line, S. J. Gish and W. W. Jameson of Central City, Ky., have acquired a number of leases and will do some test drilling. The leases of the old Bowling Green Oil & Gas Co. were taken over and will be thoroughly tested. Some oil and gas was found in former developments, and the county is believed to contain both resources in good quantities.

In Butler and Muhlenberg counties a number of lease-takers have been active, and both these districts will receive a trying out this winter. Some oil and gas has been found in both districts.

In the extreme western end of the State Chicago operators have taken up a large bunch of leases in the Reelfoot Lake district, on the Kentucky-Tennessee border, and locations are being made for some test wells. The country is an unknown quantity, no drilling having heretofore been attempted.

Kentucky's established oil fields, those having marketing facilities, are confined to the eastern end of the State, and the new work in Western Kentucky, scattered over a wide area, is over 100 miles removed from any regular district; consequently operators are watching the new work with much interest.

Petroleum operations in the established pools of Eastern Kentucky have shown little abatement since the winter season

started, and new work is in progress in all the districts. Much new capital is being invested in developments in Wayne county, which is leading all districts in activity.

West Liberty (Ky.) operators have organized a company to develop the gas resources of Morgan county. A number of gas wells have been drilled in that district. The new company will utilize the production of these wells and drill new holes.

W. S. HUDSON.

ADVERTISING LOUISIANA.

Property-Owners Set an Example of Value to the South.

Much of the wonderful growth in population and business of California and Oregon is due to the marvelously beautiful illustrated stories told in magazines, in pamphlets and in booklets of the charms of those States. The printer's art has been used in its highest perfection to make the story catch the eye for lasting effect on the mind. But neither California nor Oregon has done anything more superbly beautiful from an artistic viewpoint of illustrated literature than has been done by a combination of leading business men and land companies interested in Louisiana, who, under an organization known as the Southern Louisiana Land Shows Association, have issued an illustrated pamphlet on Southern Louisiana. From the cover page, with its beautiful colonial house surrounded by orange-laden trees where the ripening fruit shows at its best, every page impresses itself upon the eye. The first illustration is of a great field of onions, apparently stretching for miles, the photograph having been taken of the growing field on March 2, 1910, while following that is a photograph taken on May 1 showing the field of onions in the seed, where again there stretches a view apparently miles in extent. Early peas grown in a fig orchard and photographed on March 1, and ripening beets, photographed on March 5; a great field of parsley, photographed on March 1, and of carrots on the same date, follow next in order. Then comes a full-page picture of a potato field, photographed on October 1, which was the third crop raised on that land during the year, and far away in the distance are seen the dredges, which are reclaiming these wet lands and making them available for this character of improvement. There is a corn field, where the stalks are twice as high as a man standing beside them and gathering the corn, and then a great stretch of corn land bordering one of the bayous. Then comes a picture showing great fields of corn, mint and sugar-cane. A plowing scene of unusual interest and life contrasts the old way of plowing the reclaimed lands of the Raceland Prairie section, where four or five gangs of plows, drawn by two horses each, are breaking up a stretch of prairie, while on the opposite page is shown the new way of plowing this land, where a traction engine of unusual mechanical construction is drawing a gang of many plows and doing with two men the work formerly done by many plows and many men. The traveler passing through the great rice belt of Louisiana, as he looks out of the car window, unless his mind has been dwelling on rice, thinks himself in some of the great wheat-growing belts of the far West, where for mile after mile wheat fields stretch in an almost unbroken line. The illustrations of rice-growing in the Lake Charles district as given in this pamphlet show ideal conditions, where many harvesters and reapers are at work just as in the wheat fields of the West, and vast stacks of straw, where machines are threshing out and bagging the rice on one side and blowing the chaff and the straw elsewhere.

Then come pictures of grape fruit and orange groves, of farm homes of the poorer classes as well as of those of the better-to-do condition; pictures of the canals cut to drain these lands, and of their uses by motor boats for pleasure and for profit; pictures of the shipment of corn and other produce by barges, and then some of the typical scenes of New Orleans indicative of the varied attractions, the beauty and the business strength of that charming city. No man can look through this pamphlet and study its pictures—for it is mainly a picture-book—without having awakened in him a longing to visit a land of such wonderful charms, of such activity of development, of such beauty of homes, of such richness of soil, and of such wonderful possibilities for the growing of oranges and grape fruit, the production of rice and corn, of cabbages and of potatoes and carrots and parsley and beets and early peas, of figs, of onions and of a wide variety of staple crops, as well as of these trucking and vegetable-raising industries which have become so immensely profitable. The companies who have done this work deserve commendation. That success will follow their efforts is almost certain. They have set an example of common sense, energy and broadminded money-spending which should stimulate other landowners in all parts of the South. The companies and individuals who have joined in issuing this pamphlet and in making exhibits of Southern Louisiana products at many land shows, and who offer to supply full information regarding Southern Louisiana, are as follows:

Louisiana Meadows Co., Maison Blanche Building, New Orleans.

L. B. Langworthy Company, 234 La Salle street, Chicago.

Kenner Project, 234 La Salle street, Chicago.

St. Charles Land Co., 1600 Steger Building, Chicago.

G. A. McWilliams, 1600 Steger Building, Chicago.

New Orleans Drainage Co., The Rookery, Chicago.

John Stuart Watson, The Rookery, Chicago.

Chicago-New Orleans Land & Improvement Co., American Trust Building, Chicago.

Donnelly, Eulette & Co., 125 Monroe street, Chicago.

Badger-Louisiana Land Co., Eau Claire, Wis.

Southern Delta Land Co., La Crosse, Wis.

Canal and Louisiana Bank, New Orleans.

Joyce Dredging Co., Audubon Building, New Orleans.

Louisiana Delta Farms Co., 75 Washington street, Chicago.

Suburban Realty Co., Ltd., Hibernia Bank Building, New Orleans.

Woodward, Wight & Co., Ltd., New Orleans.

Phillips Land Co., 39 Board of Trade Building, Chicago.

Louisiana Farm Land Co., 632 Gravier street, New Orleans.

Hibernia Land & Trust Co., New Orleans.

A. Baldwin & Co., Ltd., New Orleans.

New Orleans Land Co., 427 Carondelet street, New Orleans.

Belle Chase Land Co., Weis Building, New Orleans.

Macon & Schneidau, 710 Common street, New Orleans.

E. P. Brady, 711 Macheca Building, New Orleans.

Payne Investment Co., Omaha, Neb.

Walter Parker, 304 Cotton Exchange Building, New Orleans, La.

Gulf States Farmer, New Orleans.

Mercantile Club, New Orleans.

N. A. Baker & Sons, Whitney-Central Bank Building, New Orleans.

St. Bernard Improvement Co., Whitney-Central Bank Building, New Orleans.

EASTERN KENTUCKY COKE.

Comparison With the Product of the Connellsville Region.

[Special Cor. Manufacturers Record.]

Pikeville, Ky., December 23.

Following many successful tests of the Marrowbone coking coal made in the Connellsville region, the Marrowbone Coal & Coke Co., composed of Uniontown (Pa.) people, erected a battery of ovens at its plant on Marrowbone Creek in Pike county, Kentucky, and are now making a very superior quality of coke. This company has built a large electrical-power plant capable of operating 300 ovens. It now has in operation 32 ovens and contemplates building perhaps 100 more next season. The coke now being made by this company is as good as the best made in any of the many tests made in the Uniontown (Pa.) region.

All told, five carloads of Marrowbone coal have been shipped to Uniontown, Pa., for test purposes, and the writer has followed up closely the testing of each car. Every test made of this coal in that region has given splendid satisfaction. These tests were made by some of the best experts in that field, among them being T. J. Mitchell, J. F. McCracken and L. W. Fogg of Uniontown. The high quality of the Marrowbone coke has been attested by every expert who has seen it and demonstrated by every analysis made of it. A foundry test of this coke was made at Smithfield, Pa. The superintendent of the foundry making the test, over his own signature, said:

"We have tested your coke, and find it first-class in every particular. Its burden-bearing strength is excellent. We are frank to say we had better results from the charge of your coke than any we have used in five years. It is better than any coke we get here. Castings are smoother and better than we get from our coke."

The structure of the Marrowbone coke is very similar to the Connellsville coke and its burden-bearing strength practically as great. The greatest difference in the two cokes is not in structure, not in strength, but in purity, and in that there is hardly a comparison, as the Marrowbone coke runs only half in sulphur and one-fifth in phosphorus the amount carried by Connellsville coke. The greatest difference in the two cokes is in purity, and in that the Kentucky coke far excels, as is shown from the analysis below given. Each analysis was made by competent chemists and is perfectly trustworthy. Analysis follows:

	Marrowbone coke.	Connellsville coke.
Volatile matter.....	2.67	2.35
Fixed carbon.....	87.65	87.35
Ash.....	9.68	10.70
Sulphur.....	.52	.37
Phos.....	.094	.019

Approximately 50 analyses of the Kentucky coke have been made from the various tests, and in all the sulphur has run from .42 to .55 and the phosphorus never exceeded .005.

Mr. L. W. Fogg of Uniontown, Pa., after making a test of the coking quality of the Marrowbone coke, said in his written report on that test: "As far as the quality of the coke is concerned, I have never seen anything better, nor know where better coke can be obtained. Its structure nearer resembles the Connellsville coke than any I have ever seen."

After having made numerous tests of the coking quality of the same coal, Mr. T. J. Mitchell, the veteran cokemaker of Uniontown, said:

"The Kentucky coke is excellent, lacking in nothing. * * * I honestly be-

lieve, when placed in active competition with Connellsville coke, the Marrowbone coke will take the market every time."

This information should be of interest to the readers of the MANUFACTURERS RECORD because of the hidden wealth in the Eastern Kentucky field. It is virgin. Following a successful line of testing from oven to furnace and foundry, the Marrowbone Coal & Coke Co. is now making a coke every whit as good as has ever been made in the tests of this coal made in the Connellsville region. The quality is here, the quantity is here, the opportunity awaits whomsoever will embrace it.

IMPRESSED BY SPRAY.

Marshall Field & Co. Representatives Visit Textile Mills.

[Special Cor. Manufacturers Record.]

Chicago, Ill., December 26.

A party of 26 representatives of Marshall Field & Co., Chicago, together with representatives from textile publications of New York and Chicago, have just completed an extended tour of inspection of manufacturing conditions in the South, especially the large cotton and woolen mills located at Spray, N. C., which were recently purchased by Marshall Field & Co. The trip was occasioned not only by the tremendous importance of acquainting salesmen with the conditions under which the goods they handle are manufactured, but also of impressing them with the economic significance of the merging of manufacturer and distributor.

The mills at Spray are only one link in the chain of factories owned and operated by Marshall Field & Co. in central points of production in various parts of the world. The policy of this firm of establishing factories in their leading lines near to the sources of raw materials is an interesting forecast to the province of the manufacturing jobber of the near future. By owning and operating its own plants this firm has found that it is able to eliminate much of the uncertainty and delay which comes to jobbing houses that depend entirely for their merchandise upon independent manufacturers and on the job-lot method of merchandising.

It is expected that this trip will result in extensive enlargements of the plants that are located at Spray, which are already among the largest of the South.

Among other mills which represent the remarkable achievement of Marshall Field & Co. in manufacturing lines are the Zion Laces Industries, located at Zion City, Ill., which was the first factory to introduce the manufacture of Valenciennes laces in the United States. This was the work of John Alexander Dowie, and after his death the mills were taken over by Marshall Field & Co. and have since more than trebled their output.

The members of the delegation who visited the Southern mills are a unit in their expression of surprise at the wonderful development of manufacturing in the South, especially of the mills at Spray, as to the excellent sanitary conditions surrounding them, their size and the up-to-date equipment, which gives them rank with the foremost textile industries of America. W. F. Hypes, sales manager of the firm of Marshall Field & Co., in speaking of the trip said:

"The trip just made by the territorial sales managers and representatives of the departments interested in the Spray plants will be, in my opinion, of incalculable benefit. Never have I seen men so thoroughly enthused over any undertaking in connection with this business. The wonderful climate, the high class of operatives, the character and quality of the executives in charge of the various plants,

the up-to-date methods used in every branch of the industry, all work to one end—the perfection of every fabric manufactured into the highest standard of excellence regardless of cost. We have no fear of competition when the merchandise is right. Our men are going into the new year with a confidence and enthusiasm based on knowledge of facts and conditions, which will mean much to this house before 1911 is very far advanced."

Since taking over these mills Marshall Field & Co. have made extensive improvements in the properties, and much money will be spent in the future with the idea of eventually turning out of the Carolina mills just the style of goods desired by the trade they are to supply. The blanket and gingham salesmen who were present on this trip gave many helpful suggestions to the managers of the mills concerning the demands of the trade with which they come in close contact on their territories. This should result in technical improvement in the merchandise, which is already of much higher quality than that turned out a year ago.

One of the biggest developments since these mills were taken over by Marshall Field & Co. is the proposed construction of a 12-mile railway connecting Spray with Ridgeway, Va. It will connect with the Norfolk & Western, and give the mills not only cheaper rates on coal, but will facilitate a more satisfactory marketing of goods.

The exploiting of Southern manufacture by Marshall Field & Co. shows an interesting economical tendency of manufacturing to move nearer to the sources of production of raw materials, especially into the South. It also calls attention to the new conditions of marketing merchandise direct from manufacturer to retailer. Future developments of this new movement will be watched with interest. Among those in the party were:

W. F. Hypes, general sales manager, and C. D. Heller, manager of publicity, in charge; W. H. Pearson, L. L. Pidecor, Chas. E. Prahman, Gomer Davis, William Dieterle, C. H. Doner, C. O. Evans, H. L. Haas, Thomas Kane, B. M. Kemp, Geo. W. Smith, Geo. A. Lepper, Felix Mendelson, Wm. C. Miller, Wm. H. Nevins, A. Lee Parker, N. C. Mann, W. B. Birch, D. H. Crane, C. R. Mack, D. P. Russell, E. R. Stetson, Hugh Atkinson, T. L. Gant, salesmen in Iowa, Wisconsin, Montana, Washington, Oregon, Oklahoma, Arkansas, Missouri, Ohio, Michigan, the Dakotas, Minnesota, Illinois, Nebraska, Iowa, Indiana, Kentucky, Tennessee, Alabama, Mississippi, Kansas, Michigan, Louisiana, Georgia and Florida; G. W. Spofford, editor Chicago *Dry Goods Reporter*, and C. G. Phillips, president Textile Publishing Co., New York.

JOHN GLASS.

THE COTTON MILL PROBLEM.

Further Discussion of the Question of Marketing Goods.

The widespread interest in the question of the marketing of products of Southern cotton mills, discussed in our last issue by a number of the officials of mills, is emphasized in additional letters that we have received. These show that various phases of the problem are being considered. Out of the publications of these letters some aid toward its solution may be evolved. The letters follow:

On Business Principles.

Charles Adamson, Philadelphia, Pa., president Cedartown Cotton & Export Co., Cedartown, Ga.:

"In answer to your inquiry as to what is best for the cotton mills of our section to do to help themselves, I can only say buy right; spin at lower cost than your

competitor, and better yarns, and lastly, don't bother about the commissions, but get a good agent and stick to him, and don't compete against your own yarns by selling to every commission man who will make a bid. At one time we had an agent for each mill. I found that we were competing against ourselves, and getting lower prices for mule yarn than for frame. Since that time I have had one agent, Edward S. Hyde & Co. of Philadelphia, who sells our entire product, and we have eliminated competition against ourselves from our own yarn. During the time I was president of the Southern Soft Yarn Spinners' Association I found that many mills were trying to sell their product partly direct and partly through a commission house, or else through a number of commission houses. I told them they were competing against themselves. In normal years, when the cotton gamblers don't make it impossible for the mills to succeed unless they also gamble, the whole proposition boils down to one point: The mills that are run on the strictest and most modern principles will come out ahead."

To Go After Trade.

W. I. Young, president and general manager Wachovia Mills, Chattanooga, Tenn.:

"There will have to be some change or plan worked out and established between the commission house and the mills, whereby the profits and losses will be more mutually distributed between them, so that on a lower and declining market the commission house cannot arbitrarily charge the same consideration, but rather along the lines of sharing in the profits of the mill each respective year, thus making them a co-operative partner as an incentive to maintain the price of the finished product always on a basis of the cost of raw material. Based upon several years' investigation, by personal contact and otherwise, of the consumers in the Latin countries lying south of us, including South America, in my opinion, one of the real solutions of the Southern mills is to go after, in the proper manner and on the proper basis, and capture our share of this business. The cotton-mill interest of the South as a unit, in my opinion, should favor a ship subsidy bill, in order to establish trade relations to the south of us, not only in cotton products, but other diversified products of the South, and in discussing these matters with consumers in these Latin countries I find that American manufacturers could more readily simplify their position by following out the idea of selling these people 'what they want, and not what they think they need,' and put up our products in packages and otherwise conform to the facilities of transportation, and to protect against climatic conditions. Before this trade is built up to maximum possibilities, in my opinion, it will necessitate the appointment, as our consuls, of men who are entirely familiar with the present conditions and men of keen business judgment who will recognize the future possibilities, and also some plan worked out with reference to banking and financial facilities of exchange between the respective countries."

Not to Be Handled Rashly.

J. D. Massey, treasurer Eagle & Phenix Mills, Columbus, Ga.:

"Your circular-letter was duly received, with a printed slip advancing the theory that the commission or selling agents should be based on net profits, and not on gross sales. Of course, that would be much more desirable as far as the mills are concerned, but whether the selling agents could be brought to see it that way is quite another question. Before insisting absolutely on such an arrangement a mill would first have to prepare to sell its

goods direct, because it likely would be impossible to find a commission merchant who would consent to sell on that basis, and then the mill would have to either recede from its position or be prepared to handle its own sales. It is a matter that deserves careful consideration, but it is one that cannot be handled rashly."

Large Stocks Accumulated.

Cuero Cotton Factory, Cuero, Tex.:

"We have read with a great deal of interest the letter of Mr. Albert Phenix in your issue of December 8, quoting Mr. Aug. W. Smith's suggestion of a plan for marketing cotton goods. This plan looks feasible, and if the Southern mills and the commission men can only get together upon the arrangement as proposed the unprofitable conditions which now exist could be overcome. Most of the Southern manufacturers have suffered very great losses during the past two years. Many, in their efforts to keep things running until times improved, have run themselves into bankruptcy. Large stocks have been accumulated, which have been sold at a great sacrifice, and conditions have continued to get worse instead of better. Something must be done, and done very soon, to raise the price of cotton goods, so that the mills can operate at a profit on 15-cent cotton, and the quicker a plan such as that of Mr. Smith's is carried into effect the better."

Same World, More People.

H. F. Smith, Anchor Mills, Huntersville, N. C.:

"We think, in part, all consumers of cotton, as well as the purchasing world, must become acquainted with the fact that both the raw stock and cloth must bring more money. We are past the old days when a cotton-grower's children could help the father raise his cotton and they get, comparatively speaking, nothing for their labor. Was it right? Now a laborer must be paid, even if they are his own little crowd. Living is more of life on the farm now, and the world is not getting bigger, but the population is."

Tail Wagging the Dog.

L. D. Tyson, president and general manager Knoxville Cotton Mills, Knoxville, Tenn.:

"I agree with Mr. Smith that something ought to be done to get the commission men to take more interest in the success of the mills which they represent. I think the suggestion of having the commission men to be dependent upon the profit made by the mill is excellent, if it is practicable. I take it that a fixed commission of, say, 2 per cent, should be paid, and let the commission men get in addition a percentage of the net profits of the mill; otherwise, I believe the plan would be impracticable, as a commission man, like everybody else, has to have some certain amount to pay expenses. It is very unfortunate that the textile manufacturing industry in this country permits 'the tail to wag the dog, instead of the dog to wag the tail.' The commission men have comparatively little money invested unless they are merchants—and many of them are merchants masquerading as commission men—whereas the spinners have vast amounts invested, and yet permit themselves to be dictated to and their prices fixed by the commission men. There is no doubt that the commission men do not look to the interests of the mills at all. They look entirely to making favorable impressions on the buyer, so as to keep his trade, and the lower the price they can get from the mill, the better satisfied they are. They are paid by the mills, but work for the buyers. This will be so as long as the mills have no control over their commission men, and as long as they consign goods and are dependent for money accommodations from the commission men. Con-

signment of goods I consider the worst of all evils, as it only invites a sacrifice of goods. Nothing, however, can be done unless the mills get together and make a strong agreement in regard to the way their goods shall be sold, and stand up to it. This is something which it seems impossible to get the mills to do. They make agreements and hardly wait to get home before they break them."

"I do not agree with Mr. Smith that curtailment is not a remedy; it is, in my judgment, the greatest remedy we have. As long as we produce more than the buyer is willing to buy readily we will always have sagging markets and dull trade; furthermore, it is a mistaken idea to run a mill at a constant loss in order to keep up an organization. In this way things never get better; whereas, if mills curtail until there is an actual scarcity of the article which they produce, the consumer will be compelled to buy, and then the mills can demand a price that will show a profit. The woolen-mill business is even more demoralized than the cotton-mill trade. There is, in fact, too much textile machinery of every kind being attempted to be operated in this country. Not another cotton mill ought to be built within two years, nor a woolen mill within three years. It simply multiplies trouble and insures loss, not only for those who have already built, but for those who may build. The building of new mills should be discouraged in every way possible until consumption catches up with production. Overproduction and poor marketing of the product is the main cause of the lack of profit in the business. In my judgment, the day of high prices has come to stay, in cotton as well as other things. This country seems to have almost reached its maximum, for the present, at least, in cotton production, owing to climatic conditions and the boll-weevil, etc., and other countries of the world seem to be in the same fix. The spinners have the remedy in their own hands, and if they do not apply it it is their own fault. Discourage new mills and co-operate in good faith. Every man must not only be willing, but must actively do his part, and when he makes an agreement he must stand up to it. It is not to be expected that commission men are going to help the spinners out. It is a matter of business with them, and they are not to be blamed if the spinner does not know how to run his business any better than to be controlled by them. Their commissions are very little different whether the price of cotton is 12 or 15 cents, and the less trouble they have to sell the less expense they will be at, and therefore it does not matter especially to them if the spinner does sell at less than cost, as it is easier then to sell."

For Ship Subsidy.

F. P. Toof, agent Cohankus Manufacturing Co., Paducah, Ky.:

"First, as to the marketing of goods on a commission basis. While the suggestion of putting the commission men on a basis of percentage of profit might work well in some cases, doubtless in many cases, with the present state of trade, it would be impossible to put it into effect. I have long held the opinion that the commission men should be compensated on a pound basis. Five per cent, commission for selling is an ever-fluctuating cost, whereas if it was fixed on a pound basis ranging from one-half cent to one and one-half cents per pound (to be fixed according to numbers of yarns or weight of goods), it would allow manufacturers a fixed price to distribute goods, and strikes me that it would also be fair to the commission men. Looking forward to the completion of the Panama Canal, what industry of the South (provided they arise to the full significance

of the opportunity confronting them) can be more benefited than the manufacturers of cotton goods. One thing seems to me necessary for its full fruition, and that is, 'ship subsidy.' This measure of modern commerce seems to have few friends in our Southland, but from my point of view, if the South is to come to that degree of expansion in her cotton industry that she is entitled to by all the laws of geographical position, climatic conditions for producing the raw material and its manufacture, she needs beyond all these God-given advantages to demand to be put on an equal basis of distributing her manufactured goods to the markets of the world; the same coequal advantages as citizens of other countries who are now in control of the whole foreign market. And to my mind ship subsidy will be the great factor in solving our problem of getting the foreign trade, especially with China and Australia, as well as the Pacific ports of South America. This great industry, with which I have been identified since 1875, when the South had hardly 2,500,000 spindles, to its present immense proportions, can expect the same or greater ratio of expansion in the future only by going into the foreign markets, and if we are to reap our full share of the world's trade some means must be provided. The first, of course, is the completion of the Panama Canal, and I am convinced that 'ship subsidy' is its logical sequence for the future growth of the cotton manufacturing industry of our South."

Unsettled Help.

James F. MacEnroe, assistant treasurer Ware Shoals Manufacturing Co., Ware Shoals, S. C.:

"In reply to your favor of December 13 relative to circular-letter beg to say that we have read this with much interest, and believe that if the commission men are put on this basis it would benefit the mills. There can be no question about this to our mind. There is nothing further that appeals to us at this time, except that there is an apparent lack of uniform action on the part of the mills, and they all seem to mistrust each other. Uniform action would certainly ultimately result to the mutual benefit of the employer and employee. The dreadful unsettled condition of help is deplorable, and results in loss of production to the mills, together with loss of money to the operatives. The mills, in their anxiety to keep running, are, of course, to blame for this. Experience is a severe teacher, and no doubt we will all have to profit by it in the near future."

Waco Notes.

Business Men's Club,

Waco, Tex., December 23.

Editor Manufacturers Record:

Work will probably commence sometime in February on lock and dam No. 8 on the Brazos River, seven miles from Waco. This lock and dam will create a six-foot depth of water at Waco, and will make the river navigable above the city for about 15 miles.

During the past year the following companies have been organized and put into operation at Waco: The Waco Wholesale Drug Co., capital \$200,000; the Amicable Life Insurance Co., capital \$500,000; the Southern Union Life Insurance Co., capital \$250,000; the Peerless Fire Insurance Co., capital \$500,000; Texas Bonding & Fidelity Co., capital \$400,000; Central Texas National Bank, capital \$300,000. The Amicable Life Insurance Co. has its own building under construction the Higginson interests are contracting for a five-story building for the Texas Bonding & Fidelity Co., and a five-story building is being constructed for the Waco Wholesale Drug Co. C. WILBUR COONS,

Secretary.

INDUSTRIES WANTED BY SOUTHERN COMMUNITIES

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors, homeseekers and manufacturers. Communications of 200 or 300 words are likely to be given prompter publicity than more extended ones.

BRISTOL MOVING.

Board of Trade,

Bristol, Va.-Tenn., December 28.

The year 1910 was the most prosperous that Bristol has had since 1907, that year being the high tide of Bristol's progress commercially and industrially. More has been accomplished in this city since April, 1910, than in all the period since the blighting effects of the 1907 shut-downs that caused Bristol at that time to commence marking time. More than \$200,000 has been added to the payroll in 1910 than the city enjoyed in 1909. More than \$250,000 has been spent since April 1, 1910, in new buildings and municipal improvements. More than \$500,000 has been paid out through Bristol banks to the contractors and their employees for improved highways leading into Bristol. The banks of the city at the beginning of the year 1911 show more than \$200,000 on deposit than at the beginning of the year 1910. More than \$318,000 is represented in the capital of new enterprises started and now in operation in Bristol since the beginning of 1910. The year 1911 finds Bristol with a new railroad through a most virgin but marvelously rich section of the country, and this new territory is pouring its flood of buyers into the city every day.

This remarkable condition of affairs really dates back to the last week in March, 1910, when Henry Roberts, a well-known young lawyer and leading spirit in this community, led in the organization of the Booster Club, and committees were appointed to canvass every nook and cranny of the city for members without dues. These cards were taken in and classified, and immediately there followed a whirlwind campaign to sign each one over again as a member of the Bristol Board of Trade, paying certain annual dues. Mr. Roberts then took hold of the Board of Trade and reorganized and re-established it in the confidence of the public, and from that time the world knew that Bristol was on the map.

For 1911 the campaign is to be conducted in a most energetic way. The Board of Trade has already secured two industries, each with \$25,000 capital, which have agreed to commence the construction of buildings as soon as the frost is out of the ground in the spring. An effort is to be made to raise funds for systematic advertising of the city and its great resources, and all interests are getting together to add not less than \$1,000,000 to the value of manufacturing plants and commercial houses in Bristol during the year.

The Virginia-Tennessee Industrial and Agricultural Association will hold its annual meeting in this city on January 5, 1911, when a large number of distinguished people will deliver addresses.

The machinery and equipment for the Bristol Broom Factory, capitalized at \$25,000 and having a capacity of more than 100 dozen brooms per day, are being installed. The owners expect to have the plant in operation by January 10.

Pennsylvania capitalists are figuring on locating a 500-ton blast furnace in Bris-

tol, utilizing the ore from an extensive metallic iron field not very remote from Bristol. Options have been secured on the ore beds, and all information relative to the location of the plant in Bristol is being secured for the people backing this extensive enterprise.

The building for the Bristol showcase and bank fixture works will be completed within 30 days, when operations will be commenced by this newly-organized company. The products will be showcases and store and bank fixtures of standard and special design. F. M. RUSSELL,

Secretary.

JOHN WOOD JOKES.

Spartanburg, S. C., December 21.

Editor Manufacturers Record:

The possibilities suggested by the following may be of interest to the many Chamber of Commerce secretaries who make use of your columns.

The secretary of the Spartanburg organization, while on a visit to relatives in Virginia, chanced to be the one to respond to a knock. Lewis Jones, an old darkey who had been connected with a branch of the family since a time sufficiently remote for the memory of man to run not to the contrary, was bowing and scraping at the door. His mission was obvious.

"Howdy, marster. I sure is glad to see you. You is lookin' powerful well. I heard you was here. Yas, sir; dey tole me up at de house you had done come home, an' I jes' drap by to pay my 'spects. Dey is all well at de house. Dey ain't changed a bit. Me? Yas sir. Three times? I reckon it is, marster. You know ole Is'bella's Susan. Yas sir; she's de one. Your wife didn't come along dis time? Well, you mus' bring her up an' let de kin folks see what she look like. We is all mighty anxious to see de 'oman what git de bes' lookin'—oh, yas, sir; I knowed you'd be wantin' to ax 'bout de folks at de house. I jes, come by to pay my 'spects. What bizness you say you is in down where you live at? What's dat? Town buildin'? Oh, yas, sir; of course. You is in de undertakin' bizness, ain't you? Well, marster, I jes' drap by to pay my 'spects. I knowed you'd want to 'quire about us all up at de house. You sure is lookin' well. Dey treats you mighty good, I 'spec'. Who? Me? Nor sir, dey don't sell no more 'round here. You say you got a little in yo' satchel? Yas, sir. Yas, sir. I'm comin' in right now. Well, marster, I mus' be gittin' along. I jes' come by to pay my 'spects. I hopes to see you agin' befo' you leave. Yas, sir; an' ef Susan die I gwine to sen' for you. I ain't gwine have nobody but de fam'ly."

JOHN WOOD.

Secretary.

INFLUENCE OF IRRIGATION.

Commercial Club,

Pecos, Tex., December 12.

Editor Manufacturers Record:

The growth of the Trans-Pecos region is astonishing because in 1900 it was thought to be one section of West Texas where no actual development could be expected. It had the least to hope for in the way of successful exploitation 10 years ago. At that

time agriculture was practically untried, and outside of the cattle industry it had nothing upon which to base its growth in the future. As is well known, the census of 1900 had hardly been completed when irrigation began to be practiced extensively in the Trans-Pecos country, though it was not until two or three years ago that irrigation presented a very rapid growth in this section of the State, since which time there has probably been no section of the country which has shown a larger increase in irrigation farming and in actual bona fide development. In 1900 the average citizen of the Trans-Pecos country had little to expect ostensibly so far as a great future for his section of country was concerned, and yet the United States census reveals a growth of more than 100 per cent., and many people claim that great inaccuracy has occurred in the enumeration. A much different outlook is presented to the average citizen of the Trans-Pecos country in 1910 as he looks into the future and sees many things which are opening up, all tending toward a great development in the next 10 years which shall surpass the growth of the past 10 years many times over.

Today there is a large and increasing number of capitalists who are putting vast sums of money into great irrigation projects, and many thousand acres of land are, as a result thereof, being put into cultivation. The cost of the operations of the 10 irrigation companies who have done construction work in the Pecos Valley in 1910 totals the huge sum of \$2,564,000, and these plants are in various stages of completion, some of them being as near as 90 per cent. completed, while others are only 20 per cent. completed. Among the largest of these is the Pecos & Toyah Lake Irrigation Co., which is capitalized at \$1,500,000. Other large companies who are building irrigation plants here are:

Name.	Cost.	Per Ct. done.
Orient Irrigation Co.	\$750,000	35
Arno Co-operative Irrigation Co.	350,000	70
Grand Falls Mutual Irrigation Co.	200,000	90
Porterville Canal Co.	215,000	20
Toyah Valley Irrigation Co.	200,000	95
Imperial Irrigation Co.	200,000	20
Fort Stockton Lands Co.	150,000	25
Red Rock Canal.	84,000	50
Big Valley Irrigation Co.	68,000	85
Farmers' Independent Canal Co.	50,000	50

All of these companies are procuring water from the Pecos River except the Toyah Valley Irrigation Co., which is getting its water supply from Phantom Lake. A large acreage is being put under irrigation cultivation by water from the artesian belt in the districts following, the proved districts being: Pecos City, 62,000 acres; Fort Stockton, 23,000 acres, and Toyah, 19,600 acres.

The percentages of growth of the seven counties in the Trans-Pecos country, U. S. census 1910, are as follows: Reeves, 137.79; Brewster, 117.82; El Paso, 111.96; Terrell, 51.92; Pecos, 51.91; Jeff. Davis, 45.89; Presidio, \$12.06.

PORTER W. WHALEY,

Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 72 and 73, and under "Cities, Towns and Railroads Inviting Factories" on pages 100, 101, 102 and 103.

According to a report of the Census Bureau, recently published, a total of 3,739,000 telegraph and telephone poles was used in this country during 1909. Sixty-five per cent. of the poles were cedar and 16 per cent. chestnut.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds to Be Voted.

Brooksville, Fla.—City votes January 17 on issuance of \$7000 of bonds for street paving.

Contracts Awarded.

Martindale, Tex.—Caldwell county Precinct No. 2 awarded contract at \$1500 per mile for constructing 3½ miles of gravel road.

Montgomery, Ala.—City awarded various contracts for hexagon tile and gravel roadway improvements.

Richmond, Va.—City awarded contracts for curbing and guttering certain streets, for which \$15,000 has been appropriated.

Contracts to Be Awarded.

Elizabeth City, N. C.—City opens bids January 2 for paving streets with asphalt, brick or Belgian block.

Greenville, Tex.—City will soon begin paving about 10 miles of streets, for which \$100,000 bond issue has been authorized.

Lufkin, Tex.—City will pave sidewalks.

Richmond, Va.—City opened bids December 28 for grading and graveling certain streets.

Nashville, Tenn.—City begins in January the construction of the proposed Capitol Boulevard, to cost about \$12,000.

Portsmouth, Va.—Clerk of Norfolk county receives bids until January 2 for macadamizing three miles of road.

Temple, Tex.—City opened bids on December 27 for constructing 6235 square yards of pavement; brick on concrete, wood block on concrete, bitulithic on concrete, rock asphalt on concrete and Hassam concrete considered.

FOR A GULF COAST ROAD.

Organization by Representatives of Texas Counties.

[Special Cor. Manufacturers Record.]

Beaumont, Tex., December 22.

The good-roads movement, which is rapidly gaining ground in the Texas coast country, was given decided impetus at a very enthusiastic meeting held at Liberty, and which was addressed by John W. Gates. Mr. Gates lives at Port Arthur, in Jefferson county, of which Beaumont is the county-seat. Jefferson county has fully 100 miles of the finest shell roads to be found in the country. Harris county, of which Houston is the county-seat, also has a splendid and probably a more extensive system of roads than Jefferson county. Liberty, which is the county-seat of Liberty county is located midway between Beaumont and Houston.

For some time efforts have been made to encourage the people of Liberty county to build a modern highway east and west through the county to connect with the roads of Jefferson and Harris counties, and thus furnish the connecting link and give this section the longest stretch of shell roads in the United States. With the construction of such a road there will be a continuous highway from Sabine Pass to Galveston via Beaumont, Liberty and Houston.

It was in the interest of this movement that the meeting was held at Liberty last week. A goodly party of Liberty county's most substantial and progressive citizens were in attendance, and the neighboring counties and cities were well represented. Mr. Gates headed a delegation of 45 from Port Arthur, representing Port Arthur Board of Trade. The Beaumont Chamber of Commerce sent a delegation of over 50. Mr. J. S. Cullinan, general manager of the

Texas Company, which is one of the largest oil corporations in the country, and which operates enormous plants near Beaumont and Port Arthur, with general headquarters at Houston, headed a delegation that chartered a special train and made the trip from Houston to Liberty. The Galveston Chamber of Commerce also sent a delegation. Addresses were made by Messrs. John W. Gates, T. W. Larkin, secretary of the Beaumont Chamber of Commerce; Judge C. F. Stevens of Liberty county; Adolph Boldt, secretary of the Houston Chamber of Commerce; J. E. Kaufman, secretary of the Galveston Business League, and others.

The sentiment of the meeting was crystallized in a resolution to organize the Gulf Coast Good Roads Association, covering the counties of Jefferson, Orange, Liberty, Chambers, Harris, Fort Bend and Galveston. A committee of 20 was selected to at once give consideration to plans for securing the construction of roads in Liberty county, and it is believed that the people of that county will endorse the movement and authorize a bond issue sufficient to construct a road east and west through the county, and also several laterals.

Troup County Roads.

Having sold its \$200,000 bond issue, Troup county, Georgia, is planning to construct about 150 miles of sand-clay roads, with a maximum grade not exceeding 5 per cent. The Solomon-Norcross Company of Atlanta has been engaged as the engineer in charge, and now has a corps of engineers in the field. Two contracts, covering about 15 miles of road, have been awarded. The Board of Commissioners of Roads and Revenues, W. T. Tuggle, clerk, Lagrange, Ga., is in charge of the bond issue.

MINING

Bakers Creek Coal Co.

The Bakers Creek Coal Co. of Drifton, Ala., has incorporated with a capital stock of \$125,000, of which \$105,395 has been paid. Incorporators of the company include Frank J. Boyer, A. S. Boyer, Thos. W. Boyer, J. A. Spear, Milton Spear, Florence Plattenger, M. L. Neutscher and M. L. Ritter.

With \$350,000 Capital Stock.

The Smooth Coal Co. of Ashland, Ky., has incorporated with a capital stock of \$350,000 to develop coal lands in the vicinity of Ashland. Among the incorporators of the company are J. W. M. Stewart, John F. Hager, B. E. Whitman, Thos. Boggess, Jr., and S. S. Wills, all of Ashland.

A report states that the Northern Coal & Coke Co., of which J. W. M. Stewart of Ashland, Ky., is general manager, has purchased about 5000 acres of coal lands in the vicinity of Boone's Fork for development.

To Enlarge Fertilizer Plant.

The Atlantic Fertilizer Co., 35 Stock Exchange Building, Baltimore, announces that it is having plans prepared for extensive improvements to its plant at Curtis Bay. Included in these is a new double-deck pier 250 feet in length, which is already under construction, and enlargements to the plant, which will increase its capacity from 45,000 to 65,000 tons. Work on the plant will begin about the first of January, and when sufficiently advanced modern equipment will be installed.

E. L. Vickers of Tifton, Ga., has, it is reported, bought 1300 acres of land in Bibb county, upon which he will establish a stock farm.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

BUCKHANNON & NORTHERN.

Construction Bids Invited for an Important Coal Line in West Virginia.

It is officially announced that the Buckhannon & Northern Railroad Co. intends to build its line in West Virginia next year, and bids for construction are being asked until January 16 by the chief engineer, S. D. Brady of Morgantown, W. Va. The line will follow the west side of the Monongahela River from the Pennsylvania boundary to Rivesville, W. Va., 32 miles, which will include the erection of about 10,000 cubic yards of masonry for bridges. The route is level. The purpose of this road, as heretofore stated, is to develop coal lands in which the Little Kanawha syndicate is interested. Connection will be made with the Baltimore & Ohio and the Monongahela railroads.

The president of the railroad company is J. M. Schoonmaker; vice-president, Joseph Wood; secretary and treasurer, J. T. Blair, all at Pittsburg. Mr. Schoonmaker is also vice-president of the Pittsburg & Lake Erie Railway; Mr. Wood is vice-president of the Pennsylvania lines west of Pittsburg, and Mr. Blair is acting secretary and treasurer of the Belington & Northern Railroad, with which the new line is designed to eventually connect.

The Baltimore & Ohio Railroad also has an interest in the line, being represented on the board of directors.

CONTRACT AWARDED.

Construction of Texas Iron Ore Railway to Be Finished Speedily.

A report from Galveston says that Col. L. P. Featherstone, president of the Gulf & Interstate Railway, and also of the newly chartered Port Bolivar Iron Ore Railway, announces that construction contract has been awarded to the C. H. Sharp Construction Co. of Kansas City for the first 30 miles of the new line which is to be built northward, as heretofore announced, from Longview, Tex., to iron-ore fields in Cass county. Construction is to begin immediately, and is to be completed in six months. The contract covers the grading, bridge work, track, and, in fact, the entire work. In it about 1,500,000 cubic yards of excavation and embankment will have to be done. There will be about 30 bridges, most of them, however, small. The grade will not exceed .6 of 1 per cent., and the road will otherwise be constructed to handle heavy trains. Connection will be made at Longview with the Santa Fe, and the output of the ore mines will pass over its lines and the Gulf & Interstate Railway to Port Bolivar, on Galveston Bay.

Hagerstown and Clearspring.

The Hagerstown & Clearspring Railway Co. is the official title of the electric railway enterprise which proposes to build a line between Hagerstown and Clearspring, Md., 12 miles. The route is via Hargetts, Wilsons and Spicklers, on the Western turnpike. This will include one bridge over Conococheague Creek. It will be about 1800 feet long. Bids for construction will be opened about February 1. The route is in rolling country.

Connections will be made at Hagerstown with the city and the interurban electric railways, and also with the four steam roads entering there. The president of the company, is Loren N. Downs of New York; vice-president, J. B. Kreps, Hagerstown; secretary and treasurer, H. L. Kirby. Mr. Downs is also general man-

ager. Messrs. Alexander Hagner and Robt. M. McCauley, both of Hagerstown, are also interested.

New Equipment, Rails, Etc.

The rail order of the Western Maryland Railway, which is soon to be placed, will call for 22,000 tons of heavy sections for 1911 delivery, most, if not all, of which will be used on the next extension, between Cumberland and Connellsville.

The Kentucky & Indiana Bridge Co., Louisville, Ky., it is reported, contemplates the purchase of two locomotives.

A dispatch from Austin, Tex., says that the Frisco system has filed an equipment contract covering the purchase of 53 locomotives, 250 steel underframe box cars, 4 passenger cars, 3 combination passenger and mail cars, 2 baggage cars, 2 observation cars and 6 motor cars. The locomotives are ordered from Baldwin's and the American Locomotive Co.; the cars from the Standard Steel Car Co.; the motors from the General Electric Co.

The Norfolk & Western Railway has ordered 8450 tons of steel rails from the Maryland Steel Co., Sparrows Point, Md., through R. C. Hoffman & Co., Baltimore.

The St. Louis Southwestern Railway is reported getting prices on 1500 box cars and 500 flat cars.

The Chicago & Alton Railway is reported in the market for 25 cabooses.

The Louisville & Nashville, according to a dispatch from Decatur, Ala., will begin construction February 1 of 400 box cars and 200 steel underframe fruit cars at its New Decatur shops.

The Chesapeake & Ohio Railway will, it is reported, purchase 200 flat cars of 40 tons capacity.

The Savannah Electric Co. (a Stone & Webster corporation) is reported contemplating the purchase of some double-truck semi-convertible cars. They may be built at the Savannah shops.

The Norfolk & Portsmouth Traction Co., Norfolk, Va., will, it is stated, purchase eight pay-as-you-enter cars to be delivered next spring.

The Atlanta & West Point Railway, says a market report, will purchase two passenger cars and two all-steel postal cars.

Missouri Pacific's Report.

The Missouri Pacific Railway has issued its report for the year ended June 30, 1910, which shows total revenues \$53,019,136, of which less than \$1,000,000 was from outside operations, all the rest being from transportation; increase as compared with 1909, \$6,633,594; operating expenses \$37,547,371, increase \$3,629,858; net operating revenue \$15,471,764, increase \$3,012,735; total income \$17,365,495, increase \$3,212,422; net income after the payment of taxes, rentals, etc., \$13,549,133, increase \$3,104,316; net surplus after the payment of fixed charges and other rentals \$2,759,411, increase \$1,694,902. The ratio of operating expenses to operating revenues was 70.82 per cent., a decrease of 2.32 per cent. The average mileage operated was 6775 miles, an increase of 286 miles.

The report says that work has been continued on the improvements in progress last year, and that much construction and betterment work was done in the way of building second track, ballasting, putting in heavier bridges and erecting steel bridges in place of wooden ones, laying heavier rails, filling culverts and trestles, improving the drainage of the roadbed, erecting new stations, etc., new shops, and enlarging yards. The total expenditures for additions and betterments to the property, including equipment, amounted to \$8,012,135. New equipment was purchased amounting to \$832,014. The equipment of the company consists of 1095 locomotives,

651 passenger cars, 37,958 freight cars, 6244 company service cars.

There were established during the year 309 new industries in territory contiguous to the system, representing an investment of nearly \$11,000,000 and giving promise of 103,000 carloads of traffic annually. These industries include 53 different kinds of manufactures, such as automobile factories, cotton gins, furniture factories, lead smelters, oil refineries, rice mills, paper mills, stove foundries, canneries, etc. Attention is also given to the location of immigrants on unoccupied land, much of which has been brought under cultivation. The company now owns in Arkansas over 500,000 acres, but its holdings in Missouri have been reduced to 2300 acres as the result of sales.

Albany to the Gulf.

An officer of the Georgia, Southwestern & Gulf Railway Co. says that 60 miles of the proposed route, which lies through rolling country, has been located, but it is not decided when bids for construction will be received. The line will run from Albany, Ga., to St. Andrews Bay, Fla., 155 miles, via Newton, Colquitt and Donaldsonville, Ga., and Marianna, Fla. W. M. Legg of Albany, Ga., is president, and D. B. Dunn is chief engineer at the same place.

New Line in South Carolina.

Steps are being taken toward building a railroad out of McBee, S. C., and a survey has been made for a little more than five miles from that place southward toward the Ashland and Stokes Bridge section. The promoters have not been announced, nor are their plans yet disclosed. It is anticipated, however, that this survey may have something to do with the projected line from Salisbury to Monroe, N. C., and from there southeast to a connection with the Atlantic Coast Line, which might be reached in the vicinity of Lamar.

May Use Storage Battery Cars.

The East St. Louis, Columbia & Waterloo Railway Co., which is to operate over the Eads Bridge into St. Louis, Mo., will, it is stated, probably use storage battery electric cars. The line is now being completed on the Illinois side of the Mississippi River, and it may be extended to Cairo, Ill., via Columbia, Waterloo and other points. It appears that it is not fully decided to adopt storage battery cars, but that one of them will be tested on the route preliminary to awarding a contract.

J. J. Hill Said to Be Interested.

According to a report from Houston, Tex., the Chamber of Commerce there has received a letter from the Commercial Bureau of Brandon, Canada, describing the previously-reported project of a North and South trunk-line railroad from Brandon to the Gulf of Mexico. It is intimated that James J. Hill is interested, and that the route will follow the one hundredth parallel of longitude southward to a connection with the Colorado & Southern, which would give the outlet to the Gulf. Mr. Hill is said to have a franchise to build a railway which will connect with the projected Houston Bay Railroad.

Large Business in Alabama.

The report of the Alabama Car Service Association for November shows an increase of 4074 cars as compared with November of last year and of 2254 cars as compared with October of this year. A record for all the months of this year up to and including November (the figures for December not being complete) all show increases over last year, some of the gains being quite large. March, for instance, exhibited an increase of more than

18,000 cars handled as compared with March of last year. June showed an increase of over 17,000 cars. There were also some other heavy gains. The total for the 11 months show 765,396 cars handled, an increase of 128,499 cars as compared with the first 11 months of last year.

Rumored Plan for Fast Freight.

A report from Nashville, Tenn., says it is rumored that the Louisville & Nashville Railroad will build a new line from Edgefield Junction or Madison to Decatur, Ala., east of the present line, in order to establish a fast route for freight to the South and Southwest. Surveys are reported made, and it is said that the cost of construction will be \$1,000,000 or more. No official confirmation has been given of the report.

Nashville to Gallatin.

Subscriptions are reported complete at Nashville, Tenn., for the construction of the Interurban Electric Railway from that place to Gallatin, Tenn., and H. H. Mayberry, promoter of the plan, who was the builder of the line from Nashville to Franklin, Tenn., is quoted as saying that survey will begin within a month, and that the line will be in operation in a year and a half.

Railroad Notes.

A patent has been granted to James T. Doyle of Baltimore for a new style railway switch, avoiding the use of a frog in the main track, and thus, it is claimed, reducing the chance of accident.

A dispatch from Raleigh, N. C., says that the Southern Railway will improve the branch between Asheville and Murphy, N. C., by laying heavy rail, reballasting and making other betterments to the bridges and roadbed.

A dispatch from Ochiltree, Tex., says that a receiver has been appointed for the Enid, Ochiltree & Western Railway, H. G. Hendricks of Amarillo, Tex., being named. About 13 miles have been constructed between Dalhart and Victory, Tex.

The Southern Pacific Railway, it is reported, has obtained a further concession in Mexico, which will enable it to continue its line, now building, as far as Mexico City if desired. The terminal at present decided upon is Guadalajara, which has not yet been reached.

The International & Great Northern Railroad, says a dispatch from Taylor, Tex., has completed its new shops there and will occupy them after the first of January. There are seven buildings made of reinforced concrete, which cost about \$75,000. Nearly all the machinery to be used in the shops is new.

A dispatch from Wadesboro, N. C., says it is rumored that the Southern Railway will build a line from Norwood to Wadesboro, 20 miles, and thence to Florence, S. C., 50 miles, in order to establish a short route between the West and Charleston, S. C. Another report says that the Atlantic Coast Line will build from Wadesboro to Charlotte.

The State Board of Trade of West Virginia will make an effort to hasten the development of 6,000,000 acres of available agricultural land in the State.

Hardware Machinery, Etc.

Arthur C. Cohen, care of Pan-American Trading Co., New York, informed the MANUFACTURERS RECORD's representative at the New York Cement Show that he wants to represent American manufacturers of machinery, hardware, pumps, etc., in Brazil on a commission basis. He names August Belmont & Co. of New York as his references.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Georgia Power Co. Development.

Some weeks ago the MANUFACTURERS RECORD outlined the plans of the Georgia Power Co. to develop various water-power properties on the Tallulah, Chattahoochee and Etowah rivers in Georgia. These plans contemplate an ultimate expenditure of \$11,000,000 and the transmission of 101,000 horse-power by electricity. The company, of which C. Elmer Smith of York, Pa., is president, is now awarding the contracts for developing the Tallulah Falls property, where over 50,000 horse-power will be obtained. The dam will be 100 feet high, and the water will be conveyed through a 12-foot tunnel to the power-house, one and a half miles distant. There will be 150 miles of steel transmission lines on steel towers, the voltage being 100,000. C. O. Lenz, 71 Broadway, New York, is the engineer in charge, and the contracts are being awarded through the Northern Construction Co. of Detroit. The plant is expected to be in operation by July, 1912. Mr. Lenz telegraphs the MANUFACTURERS RECORD that the first Tallulah installation will be three units each, 8000 kilowatt alternators, driven by 14,000-horse-power water-wheels under a head of 600 feet, and that the ultimate development will be six units. The transmission will be 90 miles to the outer zone of Atlanta.

The Cotton Movement.

In his report for December 23 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 114 days of the present season was 7,773,152 bales, an increase over the same period last year of 947,980 bales. The exports were 4,096,564 bales, an increase of 582,126 bales. The takings were, by Northern spinners, 1,154,735 bales, an increase of 61,178 bales; by Southern spinners, 863,402 bales, a decrease of 16,979 bales.

Another \$1,000,000 Company.

Messrs. Ellison A. Smyth and J. Adger Smyth, Jr., of Greenville, S. C., propose the organization of a \$1,000,000 corporation to build a mill of 50,000 spindles and 1500 looms for manufacturing a grade of fine cotton goods not heretofore produced in the South. The Messrs. Smyth are understood to have \$900,000 worth of the stock subscribed, and they ask Greenville investors to subscribe \$100,000 in order to secure the enterprise's location in that city.

The Fort Valley Cotton Mills.

The Fort Valley (Ga.) Yarn Mills has been bought in by R. J. Taylor of Macon, Ga., and will be operated as the Fort Valley Cotton Mills, with A. J. Evans as general manager. This plant has 3500 spindles driven by a 200 horse-power steam plant.

Bleach and Dye Plant.

The Maryland Bleach and Dye Works of Baltimore will rebuild plant lately destroyed by fire. This company's new building will be a 40x60-foot two-story brick and concrete structure, equipped for bleaching and dyeing cotton products.

Textile Notes.

M. R. Sams of Union, S. C., plans the organization of a company to manufacture knit goods at Jonesville, S. C.

J. T. Lewis of Washington, N. C., is reported as interested in a plan to establish a knitting mill at Elizabeth City, N. C.

Messrs. Lockwood, Greene & Co. of Boston write the MANUFACTURERS RECORD that our recent mention of them as architects for the Inverness Mills Co. of Winston-Salem was an error. The architects who should have been named were C. R. Makepeace & Co. of Providence, R. I.

The Roberta Manufacturing Co. of Concord, N. C., is reported as to rebuild its 4064 ring spindle cotton yarn mill, burned at a loss of \$120,000.

The Planters' Manufacturing Co. of Oxford, Ala., is reported as to double its capacity. This company now has 2500 ring spindles, 1000 mule spindles, etc., for manufacturing cotton rope, etc.

The Lowell (Mass.) Bleachery telegraphs the MANUFACTURERS RECORD it contemplates building a branch plant at St. Louis, having an option on a site, but that nothing definite has been determined.

The Davis Hosiery Mills of Chattanooga has awarded contract (through architects Huntington & Sears of Chattanooga) to Chambers & Son of Chattanooga for the erection of the addition mentioned last week. This will be a two-story 40x65-foot brick structure, costing about \$4000.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Lumber Mill Directory.

A publication of interest to manufacturers, builders and other consumers of lumber and wood products has been issued by the land and industrial department of the Southern Railway at Washington, being a directory of the saw, planing, shingle, stave and heading, sash, door and blind and miscellaneous mills tributary to the Southern, Northern Alabama, Augusta Southern, Danville & Western and Virginia & Southwestern railways in Virginia, North and South Carolina, Georgia, Alabama, Tennessee, Kentucky, Mississippi, Northern Florida, Southern Indiana and Southern Illinois. Separate lists are given of sawmills, planing mills, stave and heading mills, sash, door and blind mills and miscellaneous mills, the name of the manufacturer, shipping point and post-office, nature of product and yearly capacity, where furnished, being stated in each case.

Texas Lumbermen to Meet.

Lumbermen of Houston will meet on January 20 or a few days thereafter for the purpose of arranging for the annual convention of the Texas Lumbermen's Association, which will meet at Houston April 11, 12 and 13. It is stated that Secretary Samuel T. Swinford of Houston will issue the call for the meeting as soon after January 20 as the lumbermen have a chance to arrange details.

Big Timber and Railroad Deal.

The consummation of a deal involving 55,000 acres of timber lands in Cocke county, Tennessee, together with much of the stock of the Tennessee & North Carolina Railroad, is announced from Asheville, N. C. By this deal William Whitmer & Sons, Inc., Franklin Bank Building, Philadelphia, secures the timber holdings of the Pigeon River Lumber Co. of Mt. Sterling,

N. C., and an interest in the railroad, which extends from Newport, Tenn., to Mt. Sterling. It is understood that the purchasing company will undertake the development of the timber on a more extensive scale, and will probably extend the railroad from Mt. Sterling to Canton, N. C. It states that nothing definite as to its plans can be announced at this time.

The Carolina Timber Co.

Capitalized at \$500,000, the Carolina Timber Co. of Charleston, S. C., has incorporated for the purpose of establishing plants and developing timber lands. Among the incorporators of the company are M. Rutledge Rivers and H. L. Erckmann, both of Charleston.

VIRGINIA DRAINAGE PLAN.

Making Cut-Over Timber Land Profitable.

T. J. East, vice-president Farmers' Manufacturing Co., manufacturer of fruit and vegetable packages, Norfolk, Va., writing under date of December 13 to the MANUFACTURERS RECORD about land which is being drained, says:

"The property is ours, and is being developed by and under the supervision of our general manager, Mr. B. B. Halstead, as a side issue. There are about 10,000 acres in the basin top by the canal we are digging, but we only own about 2500 acres of it. We purchased it about six years ago as a timber proposition, and while cutting the timber off were impressed with the seeming fertility of the land, provided it could be drained. We took it up with the drainage department at Washington, D. C., and the experts, after examination, reported favorably, and worked out the plans which we are following.

"The work is being done under the supervision of our general manager, Mr. B. B. Halstead, who purchased the dredge especially for this purpose. The canal will be 22 feet wide, and from 6 to 10 feet deep, and will start from a tributary of the Elizabeth River about four miles from Norfolk, and will extend about seven miles in a southerly direction, paralleling the Norfolk & Southern Railroad and reaching within one-half mile of Albemarle & Chesapeake Canal. The cost will be about \$800 per mile, not counting the equipment (which was about \$13,000), and we expect to finish the work in 12 months from September, 1910.

"The land not drained, like thousands of other acres in Eastern Virginia and North Carolina, is absolutely worthless for agricultural purposes, but after drainage the most fertile known, being especially adapted for growing of hay, grain, potatoes, strawberries, etc. The soil is from two to four feet deep, of black decayed vegetable matter, clay underneath and then sand, and we are advised that it is ideal celery soil, and, if true, we propose to develop it for cultivation of celery, and thereby make Norfolk a rival of Kalamazoo for this product."

The Appalachian Fruit Growers' Association has been organized with Messrs. S. L. Lupton, Winchester, Va., president; Nat C. Frame, Martinsburg, W. Va., secretary; E. I. Oswald, Smithsburg, Md., treasurer, and James H. Harris, Stillpond, Md.; Stewart Bell, Winchester, Va.; G. L. Soper, Magnolia, Del.; C. B. Hart, Wheeling, W. Va.; R. M. Elden, Aspers, Pa., and A. T. Henry, Wallingford, Conn., vice-presidents.

J. H. Reeves of Eufaula, Ala., states that his sawmill, which has recently been enlarged and new machinery installed, is now in operation and sawing timber of a fine quality.

MECHANICAL

The G-Y Concrete System.

Contractors, engineers and others interested in improved ways and means for handling concrete are invited to investigate the G-Y system. This system is offered by the Wm. B. Hough Company, Monadnock Block, Chicago. It is illustrated by two accompanying views, one representing the gravity system in operation and the other the end of the discharge pipe placing the concrete in the forms. Describing the equipment, the company says:



G-Y SYSTEM DISCHARGING CONCRETE.

"This system includes practical, simplified appliances of general utility, consisting of suspended pipe, swinging boom and universal swivel. The process and its appliances are fully covered by basic patents; exact engineering data covering every problem of construction by this system has been formulated and made available, and the system effects radical reductions in the number of men required on a job, big economies in operation, and affords ideal concrete for monolithic construction.

"The G-Y system of mixing, conveying and distributing concrete originated in Southern California, where it was developed and perfected before given any wide publicity. Its use gradually spread over the Pacific Coast, where there are now 24 plants.

"The system is now being introduced throughout the entire East and South by this company, which has the control of it in the last-mentioned territory.

"The development of the system covers more than seven years. It evolved from the wooden trough to the wooden trough lined with galvanized iron, and finally to the galvanized-iron pipe; from the square, flat trough to the 'V' trough, and finally to the round pipe, and in size it progressed from the square chute, 24 inches wide, to pipe from 5 to 12 inches in diameter, until through experience and application appliances of general utility and simplicity have been developed consisting of tower, suspended pipe, swinging boom and universal swivel, as already stated.

"The system was originally applied to foundation work, then to walls, beams, girders and floors. At first only parts of large jobs were attempted, but gradually the system was developed to the stage where it comprised one central mixing plant and a standard equipment of simplified appliances, whereupon entire jobs in all classes of construction were successfully handled from the one central installation.

"All problems as to the maximum and minimum angles at which plastic concrete can be run, the practical limits and strengths of booms, the lengths of free ends of swivel pipe and the best practice as to size of pipes for different sizes of stone have been fully demonstrated in actual construction, and an available fund of data has been formulated which makes it possible for any job, no matter how large and involved, to be laid out in the engineer's office with all questions as to cost of installation, operating, quality and quantity of concrete delivered, predetermined with accuracy and certainty.

"The operation of the system, briefly, is

this: Mixing the concrete in any suitable batch mixer; hoisting by a skip to an elevated hopper; conveying and distributing to points of placing by suspended pipe operated by cables, booms and swivels.

"Properly-mixed concrete, being a semi-fluid, and cement acting as a lubricant, the plastic material flows readily, due to the action of gravity, through the pipes at certain predetermined angles, with no separation or congestion.

"While the principle is simple, it is claimed that the general utility of it is of little value without certain of the appli-

ances which have been perfected in the G-Y system and fully covered by three basic patents.

"In its present perfected stage the G-Y system is adequate to all classes of construction and to an unlimited variety of architectural design.

"The system eliminates nearly all the laborers ordinarily required between the mixer and the point of distribution, thus making for economy and speed of construction. An important feature in this connection is that, as the mixed concrete is handled much faster, the mixer can always be operated up to its full capacity.

"The system effects a radical reduction in the cost of distributing concrete. A phenomenal record of 40 cubic yards per hour placed is possible. With this system 10 men can mix, hoist and move more than double as much concrete per day as can be moved by 35 men with wheelbarrows or carts. These 10 men operating the G-Y system can easily place 300 yards of concrete per day, as compared with 160 yards, which is considered a high record, for 35 men under the old-fashioned wheelbarrow or cart system.

"The G-Y system saves labor at the mixer, saves labor in tamping, saves labor in handling steel (because the steel is not displaced), saves labor in excavating and eliminates practically all of the labor in moving the concrete from the mixer to the point of distribution. It prevents congestion, and does away entirely with 'time killing' due to men getting in each other's way.

"The labor cost of mixing, conveying and under unfavorable conditions as has run as low as 19 cents per cubic yard, and under unfavorable circumstances as high as 35 cents per cubic yard. The total labor cost, charging up all labor possible to the placing of the concrete, including installation of tower and plant, runs from 35 to 50 cents per cubic yard. These figures in both cases include the royalty for the use of the system.

"A vital point is that the initial 'set' of the concrete is obtained at the exact time and place required, and not en route from the mixer, as frequently happens in long hauls in carts or barrows.

"The concrete is so quickly deposited in placing without any intermediate handling that it takes its initial set simultaneously throughout the entire mass, thus producing a strength and solidity of structure not possible where carts or barrows are used. The work produced is practically monolithic.

"The conglomerate secured is uniform, homogeneous and plastic, the specific gravity being such that the rocks are held in

suspension. The downward flow of the concrete produces a churning motion, which obviates all pocketing, and practically no tamping is required.

"Contrary to a possible supposition, the concrete arrives at the delivery end of the spout as a better mixture than when it left the mixing machine. There is no separation of the stone, because a plastic and not a sloppy or wet concrete is used. The churning motion on the downward flow operates, in itself, as the most efficient mixing action and yields a homogeneous product.

"Because of the minimum amount of tamping required, the system produces perfect concrete walls, whether thick or very thin.

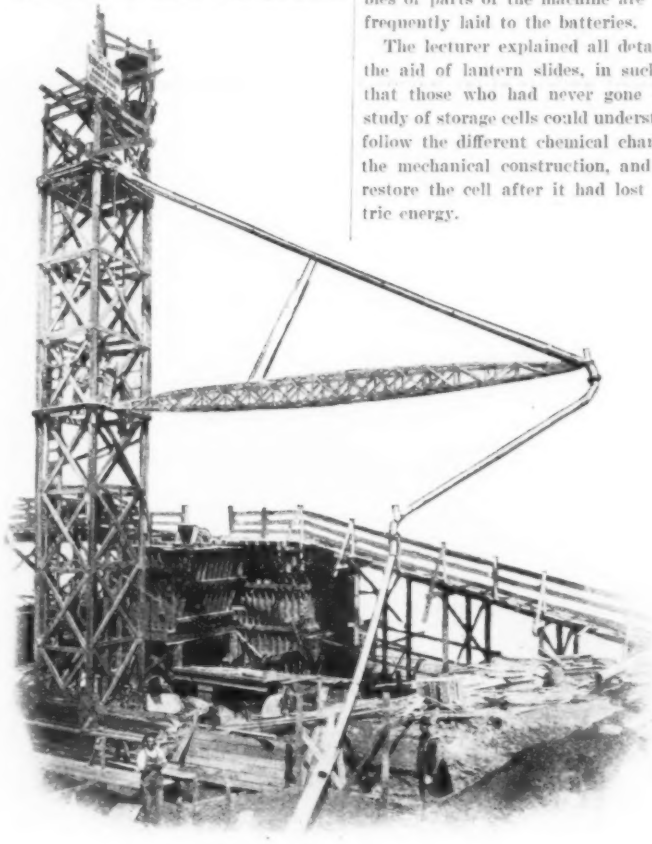
"The columns, girders, beams and the entire floor slab of the usual size building can be placed at one pouring of concrete, thus avoiding the jointures in the slabs and beams which are now necessary under present methods. The G-Y system thus makes it possible to produce, in fact, an absolutely monolithic construction.

"On floor work the breakage of hollow tile, due to barrows slipping from runways, the displacement of steel and spilling of concrete on steel and runways are overcome, and thereby important economies effected.

"In mushroom construction, or where there is an excessive amount of steel at certain parts of the structure, by spreading the bars three or four inches a small stream of concrete can be poured through the openings, quickly filling the columns.

"For the reasons stated, a perfect junction at all critical points is assured in column and beam work.

"The ability to handle large quantities



G-Y CONCRETE SYSTEM.

of concrete is limited only by the mixing and hoisting capacity, and it has been demonstrated in actual work that the concrete can be placed on a radius of 503 feet from the tower.

"The installation of equipment necessary to operate the G-Y system is so slight as not to be an obstacle in any case. Aside from the appliances which are commonly used anyhow in any proper installation for wheelbarrow and cart methods, there are only four appliances necessary to complete the system, namely, a galvan-

ized conveyor pipe, a wooden or steel boom, a swivel or flexible joint and a distribution end for conveyor pipe.

"The expense of these appliances is offset by the saving of the cost of wheelbarrows and carts and the cost of staging for runways.

"Further economies result from the general utilities of the G-Y system, the boom being used as a derrick for hoisting steel, placing columns, beams, etc., and sometimes to great advantage in excavating.

"In order to insure the success of the system by strict adherence to the methods already demonstrated as safe and practicable, while at the same time making it available to the building trades at large, it has been decided to license the use of the appliances on royalties based upon the cubic yards per job, in consideration of which blueprints of the layout for the job are furnished, together with bill of materials, specifications, etc. As customary, an experienced man is furnished at usual rates to install the system."

Automobile Storage Batteries.

An interesting and instructive lecture on the construction, operation and care of automobile batteries was given recently at the Carnegie Library, Atlanta, by A. N. Bentley, the Atlanta representative of the Electric Storage Battery Co. of Philadelphia. The purpose of the lecture was to give automobile owners some idea of how automobile and storage batteries in general should be treated, and to bring out some of the features of operation and causes for trouble in other parts of the electric automobile besides the "battery troubles," by which it was shown that mechanical troubles of parts of the machine are only too frequently laid to the batteries.

The lecturer explained all details, with the aid of lantern slides, in such a way that those who had never gone into the study of storage cells could understand and follow the different chemical changes and the mechanical construction, and how to restore the cell after it had lost its electric energy.

The lecture was aided by the efforts of William R. Collier of the Georgia Railway Co. of Atlanta, and was carried out for distinctly educational purposes, as it is generally realized that many people do not understand the use of the electric vehicle as well as they should, and that it is only by careful attention to details and plans will be properly appreciated. From the good results obtained it is evident that this example may well be followed in other communities.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and when this is necessary the statements are made as rumored or reported, and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

BRIDGES, CULVERTS, VIADUCTS

Ga., Cordele.—Crisp County Commissioners will consider construction of steel bridge over Flint River, which divides Crisp and Sumter counties.

Ky., Newport.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., and Chesapeake & Ohio Railway, F. L. Cabell, chief engineer, Richmond, Va., have agreed on plans in connection with construction of viaduct at Monmouth St.

Md., Hagerstown.—Hagerstown & Clearspring Railway Co., I. N. Downs, manager, Hagerstown, will construct 180-foot bridge across Conococheague Creek; plans ready January.

Md., Westernport.—Allegany County Commissioners, Cumberland, Md., awarded contract to Nelson-Merydith Company, Chambersburg, Pa., at \$4355 to construct two-span bridge across George's Creek; concrete construction; six-foot sidewalks and 16-foot roadway.

Mo., Joplin.—City Council will consider ordinance authorizing election to vote on issuance of \$40,000 of bonds toward construction of viaduct along Broadway across Kansas City bottoms; total cost is estimated at \$120,000, of which Union Depot Co. will be asked to furnish \$65,000 and Southwest Missouri Railway Co. \$25,000; J. B. Hodzjon, city engineer.

S. C., Charleston.—Atlantic Coast Line Railway, E. B. Pleasants, chief engineer, Wilmington, N. C., will, it is rumored, construct viaduct over Magnolia Crossing at

cost of about \$350,000; probably concrete and steel construction. Mr. Pleasants telegraphs the Manufacturers Record there are no plans prepared and no decision reached.

S. C., Greenville.—Greenville & Knoxville Railroad, R. G. Chestnut, superintendent, will construct bridges or trestles in connection with railroad construction.

Tenn., Ducktown.—County Court Bridge Committee, C. W. Renwick, chairman, awarded contract to Joliet (Ill.) Bridge & Iron Co. to construct two steel bridges, one over Burra Burra and other over Isabella Creek; contract price for steel spans is \$21.90 per foot, for concrete per yard below surface \$15, and for above surface \$7.62; grading for piers and approaches by local contractors under direction of committee.

Va., Amelia.—Bids will be received until noon January 2 for construction of 25-foot concrete-steel I-beam span across West Creek, about four miles from Amelia; to have 12-foot roadway; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Va., Critz.—Bids will be received until noon January 2 for construction of bridge across South Mayo River; to be standard 70-foot steel span; wooden flooring; concrete abutments; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Va., Jetersville.—Bids will be received until noon January 2 for construction of bridge across Flat Creek about four miles from Jetersville; to be 37 feet 3 inches, with 12-foot roadway; steel I-beam and wooden flooring; concrete abutments; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

W. Va., Brooklyn, P. O. New Martinsville, Baltimore & Ohio Railroad, W. S. Bouton, engineer of bridges, Baltimore, Md., will renew present structure across Fish Creek; character of construction not decided. (Recently noted.)

W. Va., Morgantown.—Buckhannon & Northern Railroad Co., S. D. Brady, chief engineer, Morgantown, will construct 10,000 yards of masonry bridges in connection with 32 miles of railroad from Pennsylvania-West Virginia State line to Rivesville, W. Va.

W. Va., St. Marys.—Baltimore & Ohio Railroad, A. W. Thompson, chief engineer, Charles and Baltimore Sts., Baltimore, Md., awarded contract to Youngstown Construction Co., Youngstown, O., for construction of bridge across French Creek to replace present structure; 105-foot deck-plate girder span; American Bridge Co., 39 Church St., New York, has contract for steel work.

W. Va., Wheeling.—Pennsylvania Railroad, W. C. Cushing, chief engineer maintenance of way, Pittsburgh, Pa., will renew present steel structures over Waeceling Creek with two-deck plate-girder spans, each 80 feet long, on masonry abutments and pier; will remove old bridges, supporting main track, to location under side-track, supporting it with masonry abutments on south and pile supports at center and north abutment; will require 10,000 feet of piling, 3000 yards of excavation and 4000 yards of masonry; bids will be asked when final plans are approved.

CANNING AND PACKING PLANTS

Va., Front Royal.—Old Virginia Orchard Co., J. B. Harnsberger, president, purchased factory building and will establish plant for canning preserves, jellies, pickles, etc.; machinery ordered. (See "Land Developments.")

CLAYWORKING PLANTS

Ala., Sibleyville.—Bricks.—Sibley Menge Press Brick Co. and Sibley Brothers Coal Co. have combined as Sibley-Menge Brick & Coal Co.; increased capital stock by \$100,000 to build plant with annual capacity of 12,000 common bricks and extend coal-mining operations at Langley mines; offices at 812 Brown-Marx Bldg., Birmingham, Ala.

Okla., Clarendon.—Bricks.—Goff & Griffin of Girard, Okla., will establish brick plant with daily capacity of 60,000 bricks.

COAL MINES AND COKE OVENS

Ala., Drifton.—Baker's Creek Coal Co. incorporated with \$125,000 capital stock by Frank J. Boyer, A. S. and Thomas W. Boyer, J. A. and Milton Spear and others.

Ala., Sibleyville.—Sibley-Menge Brick &

Coal Co., 812 Brown-Marx Bldg., Birmingham, Ala., will extend coal-mining operations at Langley mines. (See "Clayworking Plants.")

Ark., Midland.—Bache-Denman Coal Co., F. Bache, president, Fort Smith, Ark., will develop 3300 acres of coal land at Gowen, Okla., and Midland; daily output, 3000 tons of coal. (See Gowen, Okla.)

Ky., Ashland.—Abner Coal Co. incorporated with \$5000 capital stock by John F. Hager, H. R. Smith, L. S. Wilson and others.

Ky., Ashland.—Northern Coal & Coke Co., J. W. M. Stewart, general manager, is reported to have purchased for development about 5000 acres coal land in Boone's Fork section.

Ky., Ashland.—Smoot Coal Co. incorporated with \$350,000 capital stock by J. W. M. Stewart, John F. Hager, B. E. Whitman, Thomas Boggs, Jr., and S. S. Willis.

Ky., Madisonville.—Sunset Coal Co., E. L. Hendricks, president, 719 W. Broadway, will develop 1600 acres of coal land about two miles from Madisonville; daily output, 800 tons of coal; will install machinery. (See "Machinery Wanted.")

Ky., Pineville.—East Tennessee Coal Co., E. J. Davis, president, Knoxville, Tenn., will develop 1000 acres of coal land; install machinery; daily output, 500 tons of coal. (Recently noted.) (See "Machinery Wanted.")

Mo., Webb City.—W. R. Shuck of Webb City and C. C. Yoder, Neek, Mo., secured lease on 69 acres of coal land and contemplate development.

Okla., Gowen.—Bache-Denman Coal Co., F. Bache, president, will develop 3300 acres of coal land at Midland, Ark., and Gowen; daily output, 3000 tons of coal; is installing washer for washing slack coal at mine near Midland; 400 tons per eight hours capacity; main office, Fort Smith, Ark.; H. O. Lewis, Fort Smith, is engineer in charge. (Recently noted to have leased land from Anthracite Coal Co. of Little Rock.)

W. Va., Godfrey (not a postoffice).—Godfrey Coal Co. incorporated with \$25,000 capital stock by Harold A. Ritz of Bluefield, W. Va.; Haskins Williams of Boydton, Va.; C. N. Williams, Jr., H. M. Williams and M. W. Libbey of Warrenton, N. C.

W. Va., Charleston.—Eagle Collieries Co., recently reported incorporated with \$400,000 capital stock by Harrison B. Fisher and others, will develop 2500 acres of coal land; officers not elected.

CONCRETE AND CEMENT PLANTS

Fla., Jacksonville.—Southern Contracting & Concrete Co., H. A. Rau, proprietor, 16th and Laura Sts., will rebuild portion of plant reported burned; loss, \$15,000.

COTTON COMPRESSES AND GINS

Ga., Reynolds.—Farrish Brick Co. will establish cotton gin, etc. (See "Flour, Feed and Meal Mills.")

Ga., Thomasville.—Thomas County Farmers' Union plans erection of cotton gin.

Miss., Kosciusko.—J. L. Hammond will rebuild cotton gin recently reported burned; semi-fireproof construction; brick; daily capacity, 40 to 60 bales of cotton.

Miss., Laurel.—R. L. Taylor of Grenada, Miss., will rebuild cotton compress reported burned; loss \$20,000.

Okla., Bixby.—J. T. Mitchell of Coweta, Okla., is promoting organization of company to establish cotton gin.

S. C., Charleston.—Rogers-McCabe Company is reported to install another cotton press, increase capacity and extend wharves.

Tenn., Winchester.—Templeton Gin Co., Henry M. Templeton, president, will erect cotton compress recently noted; to include 2-70-foot saw, press, seedhouse, office and power-house; cost \$2300; will install machinery. (See "Machinery Wanted.")

COTTONSEED-OIL MILLS

N. C., Newton.—John P. Young, L. C. Bickert, A. H. Crowell and others are promoting establishment of cottonseed oil mill.

DRAINAGE AND IRRIGATION

Ark., Texarkana.—R. H. T. Mann, J. D. Conway and others are interested in plan to levee and reclaim about 170,000 acres of Red

River bottom lands in Miller county, Arkansas, and Bowie county, Texas.

N. C., Wilmington.—Drainage Commissioners of Lyon Swamp Drainage and Levee District, B. F. Keith, chairman, opens bids December 29 for construction of following: Excavating canal about 13 miles in length, estimated yardage 343,850 cubic yards; digging ditches on Worth and Vickers farms, one ditch 4x5, 2220 cubic yards, one ditch 4x4, 3081 cubic yards; digging back swamp ditches 4x5, 111 cubic yards, 4x4, 59 cubic yards, 3x3, 619 cubic yards; constructing dam on Cape Fear River, near Kelly's Cove, 35,937 cubic yards fillage; C. R. Humphreys, civil engineer, Wilmington.

Tex., Alpine.—Joseph Moss, County Surveyor, will construct irrigation system; will construct surface reservoir and expects to have 100 acres of land in cultivation next season.

Tex., Carla.—Carla Land & Irrigation Co. incorporated with \$100,000 capital stock by C. R. Wild, Carla Albrecht, Colon Schott and others.

ELECTRIC LIGHT AND POWER

Ga., Tallulah.—Georgia Power Co., C. Elmer Smith, president, York, Pa., is now awarding contracts through Northern Construction Co., Detroit, Mich., for development of Tallulah Falls property; will develop over 50,000 horse-power for transmission by electricity; construct dam 50 feet high and convey water through 12-foot tunnel to power-house 1½ miles distant; 150 miles of transmission lines, on steel towers, voltage being over 100,000; expect plant ready for operation by July, 1912; chief engineer is C. O. Lenz, 71 Broadway, New York. (Company's plan to develop total of 101,000 horse-power at ultimate cost of \$11,000,000 outlined recently.) Mr. Lenz telegraphs Manufacturers Record that first installation will be three units each, 8000-kilowatt alternators, driven by 14,000-horse-power water-wheels under head of 600 feet; ultimate development six units, as above; transmission 90 miles to outer zone of Atlanta, Ga.

Ky., Lexington.—Fayette Lighting Co. is having plans prepared under supervision of A. H. Peck, general manager, for electric-power plant.

La., Crowley.—City Council authorized purchase of 110-horse-power engine, 150-kilowatt dynamo and 75-kilowatt dynamo to be installed in electric-light plant; will install two-unit system and 24-hour service of lights and power. Address The Mayor.

La., New Orleans.—Consumers' Electric Light & Power Co. (recently reported incorporated with \$1,500,000 capital stock) will be organized with Samuel Insull, Chicago, Ill., president; to continue operation of Consumers' Electric Company's system, consisting of two electric-light and power plants and number of power stations purchased at \$1,250,000; new company has arranged for issuance of \$1,500,000 of bonds.

Mo., Warsaw.—S. O. Norris of Continental Power & Development Co., Clinton, Mo., purchased Arnolds mill property and will furnish electric light and power to Warsaw; power will be obtained from Niagara River.

N. C., Black Mountain.—Blue Ridge Association for Christian Conference has engaged C. E. Waddell, Asheville, N. C., as engineer in charge of construction of lighting plant and waterworks. (Previously noted. Also see "Schools.") (See "Water-Works.")

Okla., Collinsville.—People's Ice & Light Co. incorporated with \$50,000 capital stock by J. H. Middleton, H. D. Barnard, C. L. Goodale and C. T. McCarty.

Okla., Stilwell.—City awarded contract to Southwestern Engineering Co., Oklahoma City, Okla., for construction of electric-light plant; cost \$5000. (Recently noted to have voted \$2000 bond issue.)

Okla., Stilwell.—City awarded contract to Southwestern Engineering Co., Oklahoma City, Okla., for construction of electric-light plant; work will commence about January 7, and will be completed in 100 working days. (Bond issue of \$5000 recently noted voted.)

Tenn., Manchester.—City contemplates issuing \$25,000 worth of bonds for construction of water-works and electric-light plant recently noted; E. F. Vaughn, Mayor. (See "Machinery Wanted.")

Tex., Fort Stockton.—Pecos County Commissioners granted franchise to Clay Bros.,

San Angelo, Tex., to construct and operate electric-light plant.

Va., Lexington.—Rockbridge Power Corporation, John L. Livers, engineer, Buena Vista, Va., purchased water-power, poles, wires, cables, etc., of Lexington Light & Power Co.; will extend lines to Lexington and operate plant; has 10-year franchise. (Recently noted.)

W. Va., Martinsburg.—Martinsburg Power Co. will erect brick addition in which to install 1000-horse-power electric and steam turbine engine; 1000-horse-power steam boiler is being installed in present boiler-room; will be fitted with mechanical stoker; new equipment contracted for and will give plant capacity of 2500 horse-power.

FERTILIZER FACTORIES

Ala., Ithaca.—R. C. Williams, cashier of Third National Bank, and others are interested in establishment of fertilizer plant. (See "Machinery Wanted.")

Md., Baltimore.—Atlantic Fertilizer Co., 35 Stock Exchange Bldg., has plans for improvements to plant at Curtis Bay, to include a double-decked pier about 250 feet long; new machinery installed to increase annual capacity from 45,000 to 65,000 tons.

FLOUR, FEED AND MEAL MILLS

Ga., Reynolds.—Farrish Brick Co., Macon, Ga. (previously reported incorporated under "Clayworking Plants" by J. J. Cobb and others), will establish grist and saw mills and cotton gin in connection with brick plant.

Ky., Lexington.—Woolcott Bros. of Winchester, Ky., organized with \$100,000 capital stock; Nelson Woolcott, manager; plans by Suley Chian, Lexington, for flour mill; four stories; brick; stone foundation; portion covered with iron; cost \$10,000.

Miss., Brookhaven.—W. R. Byrnes of Topeka, Kans., will erect mill.

N. C., Thomasville.—Glen Anna Milling Co. incorporated with \$10,000 capital stock by Robert H. Brockett, A. D. Brockett and G. E. Crowell.

Tex., Fort Worth.—Bewley Mills incorporated with \$100,000 capital stock by H. C. Bewley, Edwin E. Bewley and William Bonar.

Va., Salem.—Shank Milling Co. incorporated with \$25,000 capital stock; H. D. Shank, president; W. S. Shank, secretary.

FOUNDRY AND MACHINE PLANTS

Ark., Stuttgart.—Machines.—Krumpen Machine Co. incorporated by L. Krumpen, H. S. Koppmeier and Fred Selig.

N. C., Elizabeth City.—Iron Works.—Elizabeth City Iron Works & Supply Co., J. F. Sanders, president, will erect foundry, machine and smith shops to replace burned buildings recently noted; fireproof construction; size of buildings and date of opening bids not set; plans by Mr. Sanders. (See "Machinery Wanted.")

N. C., Greensboro.—Motors, etc.—Marion Motors Southern Co. incorporated with \$25,000 capital stock by H. L. Hopkins and others to manufacture motors, engines, etc.

Tenn., Chattanooga.—Iron.—Ross-Meehan Foundry Co. will rebuild gray-iron foundry reported burned at loss of about \$21,000.

GAS AND OIL DEVELOPMENTS

La., Vivian.—Arkansas Natural Gas Co., Little Rock, Ark., contemplates erection of \$200,000 plant to furnish power for pumping natural gas from Caddo field to Little Rock and other cities through pipe line under construction and previously noted.

Md., Painsburg.—Maryland Oil & Gas Co. incorporated with \$30,000 capital stock; Levin W. Dorman, president; R. Frank Williams, vice-president; Samuel A. Graham, secretary-treasurer.

Okla., Ponca City.—Southwestern Gas Co. organized to construct natural gas pipe lines from Ponca City fields to different portions of Oklahoma; also to pipe crude and refined petroleum; arranged to supply Enid, Okla., with natural gas; distance, 60 miles.

Tex., Aquilla.—Aquilla Oil & Gas Co. incorporated with \$500 capital stock by J. T. Robertson, E. L. Jackson and J. J. Bennett.

Tex., Dallas.—White Rock Oil Co. incorporated with \$25,000 capital stock; K. B. Archer, president; J. W. Gross, vice-president; E. H. Zumberg, second vice-president and general manager; Clarence De Bow, secretary-treasurer.

Tex., Lufkin.—Lufkin Oil & Gas Co. incorporated with \$800 capital stock; C. L.

Witherspoon, president; W. M. Glenn, secretary-treasurer.

Tex., Pecos.—El-Re Oil & Development Co., organized with \$320,000 capital stock, has acquired tract of land in Toyah Oil Field, about 34 miles from Pecos, and will develop; G. C. Mountcastle, president; E. E. Fosdick, vice-president; Dr. M. L. Talbot, second vice-president; William Reeves, treasurer, all of Fort Worth, Tex.; U. S. Pawkett, secretary and manager, of Pecos.

W. Va., Beary.—Fayette Petroleum Co. incorporated with \$500 capital stock by J. T. W. M. Miller of Parkersburg, W. Va.; J. T. McNickell of Beary, and others.

W. Va., Charleston.—Chapel Farm Oil Co. incorporated with \$100,000 capital stock by W. F. Goshorn, J. W. Kennedy, A. P. Rand and others.

W. Va., Parkersburg.—Niswander-Goetz Oil Co. incorporated with \$40,000 capital stock by G. W. Niswander, C. Goetz, K. Snodgrass and others.

ICE AND COLD-STORAGE PLANTS

Ala., Centerville.—E. W. Townsend will not erect ice plant recently noted.

La., New Orleans.—United Fruit Co., 131 State St., Boston, Mass., will construct cooling and heating plant for fruits; to cost \$200,000; capacity, 150 cars of fruit.

N. C., Beaufort.—Beaufort Ice Co. recently reported incorporated with \$50,000 capital stock; will erect building and install 10-ton ice plant; details not definite; C. L. Duncan, president; C. S. Wallace, vice-president; W. E. Swan, secretary-treasurer. (See "Machinery Wanted.")

Okla., Collinsville.—People's Ice & Light Co. incorporated with \$50,000 capital stock by J. H. Middleton, H. D. Barndollar, C. L. Goodale and C. T. McCarty.

Va., Newport News.—Armour & Co., Chicago, Ill., reported to install cold-storage plant.

Tenn., Chattanooga.—Armour & Co., Chicago, Ill., will establish \$75,000 cold-storage plant.

Tex., Fort Stockton.—County Commissioners granted 10-year franchise to Clay Bros., San Angelo, Tex., to establish ice factory and electric-light plant.

IRON AND STEEL PLANTS

Va., Norfolk.—Steel Plant.—Henry Wick of Youngstown, O., advises Manufacturers Record that he and associates have decided not to purchase Norfolk Iron & Steel Co.'s property as nucleus for steel plant. (Lately mentioned.)

LAND DEVELOPMENTS

Ala., Birmingham.—Stelner Bros. purchased 97,000 acres of land in Morgan, Cullman, Winston and Lawrence counties for \$250,000 and will develop, dividing into farms of about 40 acres.

Ala., Birmingham.—Stewart-Watson Real Estate Co. incorporated with \$500 capital stock; J. H. Stewart, president; H. M. Watson, vice-president and treasurer; A. J. Watson, secretary.

Ala., Mobile.—South Orchards Co. will develop orange and pecan orchard, planting 20,000 orange trees and 5000 pecan trees.

Ark., Eldorado.—Marshall Land Sales Co. incorporated with \$50,000 capital stock by A. H. Marshall, W. R. Marshall, F. Holkinson and others.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., purchased site at Lincoln Ave., Todd Pl. and 2d St. N. E. (about 400,000 square feet) and will develop; subdivide, cut new streets, install sewers, water and gas mains; construct electric conduits, macadam road surfaces, granolithic curbs and sidewalks; erect about 400 dwellings; two stories; six rooms; furnace heat.

Fla., Jacksonville.—James B. Bours and C. S. Cowenhoven (recently noted to have purchased 1000 acres of land on St. John's River) will develop part as farming section, and land lying on river front for manufacturing sites; 200 acres will be developed as townsite, to be known as Arlington Heights.

Fla., Johnstown.—Florida Farm & Home Co., S. A. Watson, president, recently reported incorporated, will develop 11,000 acres of land near Johnstown for colonization; will erect administration building and construct demonstration garden; capital stock, \$100,000; main office, 310 Clark Bldg., Jacksonville, Fla.

Fla., Miami.—Home Improvement Realty Co. organized by Charles T. McCrimmon of Miami, A. M. Kitchen of Cornelia, Ga., Samuel Dunlap of Gainesville, Ga.; will develop holdings in northern part of Dade county; subdivide into village lots, grade streets, construct sidewalks, etc.

Fla., St. Petersburg.—St. Petersburg Realty Co. incorporated with \$30,000 capital stock; C. E. Chambers, president; F. D. Sawyer, vice-president; W. S. Smith, treasurer; purchased 12½ acres of land; will subdivide into 50x135-foot lots and develop.

Ga., Macon.—Middle Georgia Land Co., recently reported incorporated with \$5000 capital stock, will purchase land in Southern Georgia, subdivide and develop; plans improvement of nine acres for manufacturing sites after January 1; later contemplates erection of lumber plant to supply material for buildings, establishing supply-house for farming and building materials, etc.; George W. Wood, Jr., president; J. W. Timmerman, Jr., secretary-treasurer.

Ga., Macon.—Rivoli Improvement Co. (recently reported incorporated by E. W. Stetson and others) will develop several hundred acres of land six miles from Macon, probably for residence sites.

Ga., Waycross.—Riverside Park Co., A. M. Knight, president, recently reported organized with \$145,000 capital stock, will subdivide land and as subdivision develops will install water-works, sewerage and lighting plant; no bids asked.

Ky., Louisville.—G. Hunt McAllister purchased 78 acres of land; will subdivide into villa sites and develop.

Md., Baltimore.—New Era Realty & Construction Co., 349 Highland Ave., is reported to have purchased 20 acres of land between Woodlawn and Dalrymple Aves. and to develop for residence section to be known as Forest Park Gardens; subdivide into building lots, constructing streets, cement sidewalks, sewerage and water systems; erect 12 2½-story frame cottages, to cost \$5000 each.

Md., Hancock.—R. Samuel Dillon purchased orchard lands for \$10,000; will develop apple and peach orchards.

Okla., Oklahoma City.—Capitol Building Co. organized by C. F. Colcord, C. G. Jones, H. Overholzer and others; will plat and sell 650 acres of land donated for Capitol purposes.

Okla., Tulsa.—Parkdale Land Co. incorporated with \$20,000 capital stock by J. E. Head, Geo. S. Berry and others.

S. C., Duncan.—Duncan Land Co. incorporated with \$5000 capital stock; A. M. Moore, president; A. M. Smith, secretary.

Tex., Crystal City.—Cross Farming Co. incorporated with \$1,000,000 capital stock by E. J. Buckingham, Carl F. Gross, H. L. Howard and Mason Williams.

Tex., Fort Stockton.—Leon Springs Irrigation Co., J. Y. Webb, Jr., president, Dallas, Tex., recently reported incorporated, plans irrigation of 10,000 acres of land in Leon Valley by constructing three ditches; gravity flow; awaits completion of Orleans Railroad line now building near property before planning further developments.

Tex., San Juan.—San Juan Land & Improvement Co. incorporated with \$25,000 capital stock by C. E. Hammond, J. G. Fernandez and John Gregg.

Tex., Webster.—Houston Orchards Co. organized with \$250,000 capital stock; J. S. Kendall, president, Dallas, Tex.; Arch McDonald of Houston, Tex., and Ross L. Clark of Port Lavaca, Tex., vice-presidents; N. E. Meador, secretary-treasurer, of Houston, Tex.; purchased 6500 acres of irrigated land; will divide into small blocks for country homes and fruit farms; complete pike road now under construction, shell other roads, etc., and plans erection of homes.

Va., Front Royal.—Old Virginia Orchard Co., previously reported incorporated with \$10,000 capital stock, has tract of land with 1000 fruit trees, etc.; purchased building and will equip for canning jellies, pickles, etc.; machinery ordered; J. B. Harnsberger is president.

Va., Harrisonburg.—Peerless Orchards incorporated with \$50,000 capital stock; W. T. Phillips, president; D. U. Pitt, vice-president, both of Norfolk, Va.; E. B. Crawford, secretary-treasurer; purchased 80 acres of land between Harrisonburg and Staunton, Va., and will develop for orchards.

Va., Lexington.—Rockbridge Realty Corporation incorporated with \$15,000 capital stock; R. S. Bruce, president; W. R. Kennedy, vice-president; T. S. Burwell, treasurer; E. S. Shields, secretary.

Va., Norfolk.—New Edgewater Corporation incorporated with H. C. Laird, president; W. C. Cobb, vice-president; S. A. Woodward, secretary-treasurer; will develop 36 acres of land for residence section; install gas, electricity, etc.; construct bituminous macadam streets, granolithic sidewalks, etc.

Va., Portsmouth.—Portsmouth Investment & Realty Co. purchased tract of land from

Phillips Mahoney & Co.; will subdivide into 36 building lots, construct vitrified-brick pavements and granolithic sidewalks, park center between walk and curbing, and develop as residential section to be known as Raleigh Place.

Va., Richmond.—Bonded Realty Co. incorporated with \$10,000 capital stock; John Mitchell, Jr., president; John T. Taylor, secretary.

Va., Salem.—College Park Land Co. incorporated with \$40,000 capital stock; A. M. Bowman, president; R. W. Kime, secretary-treasurer; will develop 60 acres of land adjoining Lutheran Female College site for residence section.

Va., Staunton.—Bellview Orchard Co., John S. Pancake, president, recently reported incorporated with \$25,000 capital stock, will develop 100 acres of land as fruit orchard.

W. Va., Martinsburg.—Fairview Orchards Co. incorporated with \$25,000 capital stock by R. F. Mason, Gray Silver, J. M. Small and others.

W. Va., Fairmont.—Green Spring Orchard Co. incorporated with \$10,000 capital stock by John F. Phillips, J. C. McNeeley, A. B. Prichard and others.

W. Va., Martinsburg.—Pomona Orchard Co. incorporated with \$100,000 capital stock by F. B. Magoffin of Martinsburg, L. C. Moge of Leesburg, Va., and others.

W. Va., Wheeling.—Real Estate Improvement Co. incorporated with \$25,000 capital stock by B. W. Peterson, C. E. Blue, C. H. Copp, H. S. Bradley and others.

LUMBER MANUFACTURING

Ark., Homan.—J. C. Brown will rebuild sawmill reported burned at loss of about \$25,000; plant leased by Homan Lumber Co.

Ga., Macon.—Middle Georgia Land Co., Geo. W. Wood, Jr., president, contemplates erection of plant to manufacture building materials. (See "Land Developments.")

Ga., Reynolds.—Farrish Brick Co. will establish sawmill. (See "Flour, Feed and Meal Mills.")

Ky., Belle Point.—Contrary Creek Lumber Co. incorporated with \$5000 capital stock by W. J. Roberts, Thomas Warner and George Kincaid.

Ky., Tompkinsville.—Hull & Co., Carthage, Tenn., purchased timber land in Monroe and Cumberland counties for \$24,000.

Md., Baltimore.—Mill Work.—Enterprise Mill & Lumber Co. will erect temporary plant to replace factory reported burned at loss of \$143 E. Monument St.; will engage architect to prepare plans for permanent plant; temporary office, 318 Law Bldg.

Miss., Colby.—Loch Lomond Lumber Co. incorporated with \$30,000 capital stock by H. S. Vincent and J. D. Purvis.

Miss., Tylertown.—Tylertown Lumber Co. incorporated with \$50,000 capital stock by L. L. Lampton and W. M. Lampton of Magnolia, Miss., and O. W. Conner of Seminary, Miss.

North Carolina.—Joseph Keys, Graham, Va., purchased 14,000 acres of timber land and will erect sawmills.

S. C., Charleston.—Carolina Timber Co. incorporated with \$500,000 capital stock by M. Rutledge Rivers and H. L. Eckman.

Tenn., Carter County.—Doeville Lumber Co., Doeville, Tenn., purchased timber land in Carter county; William S. and Frank R. Whiting and C. Boice (latter of Richmond, Va.) are interested.

Tenn., Crestmont.—William Whitmer & Sons, Inc., Franklin Bank Bldg., Philadelphia, Pa., purchased (from Pigeon River Lumber Co., Chas. I. James, vice-president, Baltimore, Md.) over 55,000 acres timber land and control of Tennessee and North Carolina Railroad, extending from Newport to Mt. Sterling; purchase price, \$1,500,000; purchaser will develop, but is not ready to state details. (Lately incompletely mentioned.)

W. Va., Deer Creek (not a postoffice).—Deer Creek Lumber Co., main office address, Cass, W. Va., will open bids in spring of 1911 for erection of single-land and band-saw mill; to cost \$20,000; machinery purchased; daily capacity, 50,000 feet of white pine, oak and hemlock; J. F. Toobert, Jersey Shore, Pa., is president; L. D. Herritt, manager.

W. Va., Elkins.—Cherry Lumber Co. incorporated with \$100,000 capital stock by Harley Akin, A. M. Hixton, James L. Broadfoot and others.

METAL-WORKING PLANTS

Md., Baltimore.—Plating, etc.—Joseph P. Mercer Plating Co., 218 N. Charles St., incor-

porated with \$5000 capital stock by Joseph P. Mercer, Jesse L. Fowler and Victor I. Cook to manufacture plate and gold metals.

Mo., St. Louis—Brass.—Valvex Brass Manufacturing Co. incorporated with \$50,000 capital stock by Clarence E. Anglen, William G. Gates and G. Howard Willett.

MINING

Ala., Carara, P. O. Talladega.—Alabama Carara Marble Co. organized; J. M. Meighan, superintendent; purchased marble properties of Signor Moretti, including marble mining and cutting machinery, engines, hoists, etc., and will operate.

Georgia—Pyrites.—Walter W. Wisdom, 529 Candler Bldg., Atlanta, Ga., is interested in organization of company to develop pyrites deposits.

MISCELLANEOUS CONSTRUCTION

Ky., Covington—Tunnel.—Louisville & Nashville Railroad awarded contract to Thrasher & Gunter, Chattanooga, Tenn., to widen Covington tunnel; reported cost about \$500,000; tunnel is about 1000 feet long, and will be timbered and concreted throughout; double track will be laid.

La., East Carroll Parish—Levee.—John G. Sessions of New Orleans, La., is lowest bidder at 12.44 cents per cubic yard for construction of Atherton Levee on right bank of Mississippi River in East Carroll parish; contents, 50,000 cubic yards; work to be under supervision of Commissioners for Fifth Louisiana Levee District. (Recently mentioned.)

La., New Orleans—Wharf.—Commissioners' Port of New Orleans, Hugh McCloskey, president, Hibernia Bank Bldg., and S. E. Redfern, Commissioner of Immigration, are conferring relative to construction of wharf in front of proposed immigration station; proposed that wharf be 200 feet long and 40 feet wide; wharf and runways to immigration station to be covered.

Tex., Corpus Christi—Wharf.—City will vote on issuance of bonds for construction of wharf from business center 1000 feet into bay, connecting with Corpus Christi navigation channel to Gulf; wharf is to have 600 feet of apron with warehouses; total cost to be \$50,000; structure will consist of piling filled with excavation from 13-foot turning basin by Government dredge. Address city commissioners.

Tex., Houston—Canal.—Raywood Canal & Milling Co. increased capital stock from \$100,000 to \$200,000.

MISCELLANEOUS ENTERPRISES

Ala., Birmingham—Construction.—Windham Bros. Construction Co., 314½ N. 18th St., recently reported incorporated with \$10,000 capital stock, will undertake general construction, build houses, etc.; T. C. Windham is president.

Ala., Robertsdale—Tobacco Cultivation, etc.—Galesburg (Ill.) Development Co. will erect two additional tobacco barns; 40x100 feet each; will plant and erect shade for 16 additional acres of tobacco; is preparing to erect shade and plant 20 acres of tobacco in shade, and plant 10 acres in sun; will also plant five acres of Satsuma oranges.

Ark., Cotter—Publishing.—Cotter Printing & Publishing Co. organized with \$2500 capital stock; H. H. Gallup, president; E. J. Loop, secretary-treasurer; H. D. Routzong, editor and manager; will establish printery and newspaper plant to publish the Cotter Record.

D. C., Washington—Garage.—L. A. Hubbardfield awarded contract to M. F. Piper, 147 Rhode Island Ave. N. W., Washington, to repair garage at 1321-23 14th St. N. W.; cost \$8000; plans by A. B. Heaton, 1319 F St. N. W., Washington.

Ga., Atlanta.—Southern Tree Expert Co. incorporated with \$10,000 capital stock by Paul W. Elwell H. C. Robinson and J. C. Fuller; will engage in general forestry; offices at 1018 Atlanta National Bank Bldg.

Ga., Macon—Supplies.—Middle Georgia Land Co., George W. Wood, president, contemplates establishment of supply-house for farming and building materials, etc. (See "Land Developments.")

Ky., Hickman—Steam Laundry.—Oce Maris and A. E. Kennedy will establish steam laundry; equipment purchased.

La., Arcadia—Livestock and Planting.—Wise Planting & Livestock Co. incorporated with \$20,000 capital stock; G. B. Wise, president; Tracy Stone, vice-president; S. C. Wise, secretary-treasurer.

La., New Orleans—Plumbing.—Manion & Co. incorporated with \$200,000 capital stock

by J. E. Manion, Walter J. Manion, Martin H. Manion and others.

Md., Baltimore—Bleaching and Dyeing.—Maryland Bleach and Dye Works, 2805 Hudson St., will rebuild burned plant; two stories; brick and concrete; 40x60 feet. (Recently noted.)

Md., Baltimore—Garage.—Grafflin Cook, 801 Maryland Trust Bldg., awarded contract to Walter E. Burnham, 15 E. Fayette St., Baltimore, to erect garage rear northeast corner Charles and 33d Sts.; two stories; brick; 26x36 feet; slate roof; hot-water heat; cost \$2300; plans by Joseph Evans Sperry, Calvert Bldg., Baltimore.

Md., Baltimore—Transfer.—Merchants' Transfer Co., Frederick J. Blum, president, 17 S. Charles St., increased capital stock from \$10,000 to \$50,000.

Mo., Kansas City—Laundry.—Hunt Laundry Co. incorporated with \$5000 capital stock by Oscar L. Shane, Rose K. Shane, Ruth Hunt and others.

Mo., Kansas City—Printery.—Selp Printing Co. incorporated with \$10,000 capital stock by John T. Selp, Wm. N. Selp and R. M. Selp.

Mo., St. Louis—Construction.—International Construction Co. incorporated with \$5000 capital stock by Geo. Baptistel, Ronald McK. Bates and others.

Mo., St. Louis—Sheet Metal.—Midland Sheet Metal Supply Co. incorporated with \$2000 capital stock by George Hruska, K. Gertrude Bender, Frank F. Pieper, Edward S. Horwitz and others.

N. C., Charlotte—Dairy.—Galloway Dairy Co., recently reported incorporated with \$25,000 capital stock, will erect building to cost \$5000; daily capacity, 100 gallons of milk; H. D. Kirkpatrick, president and manager; A. M. Haddon, vice-president; Jennie S. Kirkpatrick, secretary-treasurer.

N. C., Winston-Salem—Construction.—Angelo Caldwell Construction Co. incorporated with \$50,000 capital stock; F. D. Caldwell, president; J. F. Ange, secretary-treasurer.

S. C., Andrews—Live-stock.—Andrews Live-Stock Co. incorporated with \$10,000 capital stock; W. T. Liles, president; T. W. Bellune, vice-president and general manager; H. K. Ward, secretary-treasurer.

S. C., Charleston—Construction.—Bowe Page Dray & Construction Co. incorporated by T. C. Page and A. G. Rolfe.

S. C., Summerton—Hardware.—Clarendon Hardware Co. incorporated with \$10,000 capital stock; W. H. Anderson, president; A. D. Plowden, vice-president; J. M. Plowden, secretary-treasurer.

Tenn., Jackson—Publishing.—Jackson Daily Democrat will rebuild portion of plant reported burned.

Tenn., Knoxville—Electric Supplies.—Henry M. Moses Electric Co. incorporated with \$5000 capital stock by Harry C. Keeton, B. A. Massey, R. A. Johnston and Everett Moses.

Tenn., Memphis—Noble S. Bruce Auto Co. incorporated with \$10,000 capital stock by N. S. Bruce, J. W. Bruce, J. W. Apperson and others.

Tenn., Nashville—Publishing.—Company organized with \$100,000 capital stock by Chas. H. Slack, J. W. Reid and others; will establish newspaper publishing plant; leased building and purchased equipment.

Tex., Amarillo—Automobile Supplies.—Amarillo Auto Supply Co. incorporated with \$20,000 capital stock by M. C. McMaster, T. M. Hand and A. W. McSpadden.

Tex., Amarillo—Plumbing.—R. L. Bigger Plumbing & Heating Co. incorporated with \$5000 capital stock by R. L. Bigger, Ben H. Stone and Ben Harrison.

Tex., Paris—Publishing.—Advocate Publishing Co. incorporated with \$17,500 capital stock by W. N. Furey, Phil E. Baer and S. M. B. Long.

Tex., San Antonio—Machinery.—Foote-Roloff Machinery Co., recently reported incorporated with \$10,000 capital stock, has elected W. G. E. Roloff president, B. V. Samuel vice-president, George W. Foote secretary-treasurer; has warehouse 70x100 feet; will deal in and install all classes of machinery. (See "Machinery Wanted.")

Tex., Yoakum—Stone and Granite.—Southern Marble & Stone Co., recently reported incorporated (under "Mining") with \$5000 capital stock, will deal in granite and stone; will not operate mining property; J. Lyon, president; F. F. Schwab, vice-president; E. C. Koerth, secretary; Phillip Weihauser, treasurer.

W. Va., Grafton—Construction.—Gigley Construction Co. incorporated with \$10,000 capital stock by John W. Gigley, J. H. Gigley, M. Belfont and others.

MISCELLANEOUS FACTORIES

Ark., Fort Smith—Oil Refinery.—Charles T. Madison and William Owen of Muskogee, Okla., and W. C. Wallace of Fort Smith applied for franchise to establish oil refinery; cost \$20,000.

Ala., Sylacauga—Marble Works.—Alabama Marble Co. will rebuild plant reported burned; estimated loss \$500,000.

Fla., Pensacola—Red Snapper Sauce Co., Centerville, Miss., will rebuild plant reported burned at Centerville; loss \$12,500.

Ga., Gainesville.—C. L. Deal Manufacturing Co. incorporated with C. L. Deal, president; J. A. Deal, manager and treasurer; E. L. Deal, secretary.

Ga., Macon—Oil Refinery.—The Texas Company, Houston, Tex., is reported to establish plant to manufacture petroleum and petroleum products; cost \$75,000.

Ga., Rome—Beverages.—Interstate Novakola Co. incorporated with \$30,000 capital stock by C. R. Porter, J. C. Porter and Fred Averett and others.

La., Covington.—St. Tammany Naval Stores Co. organized with \$50,000 capital stock; J. S. Jones, president; J. P. Rausch, vice-president and treasurer; T. C. Adams, secretary.

La., New Orleans—Novelties.—Orva G. Williams of Chicago, Ill., is considering establishment of branch plant to manufacture notions and novelties.

La., New Orleans—Medicine.—Hygeol Medicine Co. incorporated with \$25,000 capital stock by L. Rappannier, E. Rappannier and Walter Poynt.

Miss., Bay St. Louis—Spoon Holders.—Sanitary Spoon Holder Co. incorporated with \$10,000 capital stock by W. B. Rohmer, John Osoinach and W. A. McDonald.

Miss., Jackson—Peanuts.—Gwaltney-Bunkley Peanut Co., Smithfield, Va., plans establishment of peanut factory; will not erect plant to manufacture peanut oil, as recently reported.

Mo., Kansas City—Automobiles.—Ford Motor Co. main office, Detroit, Mich., will establish \$100,000 assembling plant for automobiles; daily capacity 50 cars.

Mo., Kansas City—Tonic.—Excelsior Tonic Co. incorporated with \$3000 capital stock by J. H. Garrett, E. M. Warder and L. H. Sothenkel.

Mo., St. Louis—Hinges, etc.—Ideal Reversible Hinge & Cabinet Co. incorporated with \$2500 capital stock by O. M. Dean, Eugene G. Dean and others.

Mo., St. Louis—Shirts.—F. C. Bonsack, 1754 Pierce Bldg., has plans for shirt factory building; 232x162 feet; fireproof construction; steam heat; electric lighting; electric elevator; cost \$85,000; will award contract January 3.

Mo., St. Louis—Labels.—Colorprint Label Co., 621 N. 1st St., recently reported incorporated with \$30,000 capital stock, has leased building and will install machinery to manufacture labels; August G. Tonnes, president and treasurer; Fred L. Tonnes, vice-president; John H. Curryer, secretary and manager.

N. C., Beaufort—Fish Oil, etc.—Beaufort Fish Scrap & Oil Co. incorporated with \$50,000 capital stock by N. W. Taylor and others.

N. C., Siler City—Gloves.—O. B. Rightsell will increase capacity of glove and mitten factory; present daily capacity 40 dozen gloves.

Tenn., Adams—Limestone Plant.—Elk Fork Stone Co., recently reported organized with B. G. Fuqua, president, will operate limestone plant; daily capacity 10 to 15 tons of crushed limestone.

Tenn., Chattanooga—Coffee Mill.—Chattanooga Coffee & Manufacturing Co. organized with \$100,000 capital stock by J. A. Sloan and Will T. Johnson of Nashville, Tenn.; A. D. Sloan and W. E. Brock of Chattanooga; will establish coffee plant at 1025 Fort St.

Tenn., Chattanooga—Steam and Air Connectors and Couplers.—Brown Connector Co. incorporated with \$50,000 capital stock by M. A. Brown, W. H. Meacham, A. W. Boyd and others; will manufacture patented steam and air connectors and couplers invented by Mr. Brown.

Tenn., Morristown—Brooms.—Morristown Broom Co. will erect 60x40-foot addition to plant recently noted; machinery mainly purchased; daily capacity 600 brooms. (See "Machinery Wanted.")

Tex., Dallas—Floor Sweep.—Dallas Floor Sweep Co. incorporated by H. C. Miller, J. H. Ferguson and A. J. Grote.

Tex., Goliad—Creamery.—Company organized with E. R. Le Master, president; O. L. Eckhardt, vice-president; W. B. Appleby, secretary-treasurer; to establish creamery. (Previously noted.)

Tex., Mercedes—Sugar.—Kilgore Sugar Co. organized with James N. Kilgore, president; T. L. Courty, first vice-president; W. H. Kilgore, second vice-president; Avery T. Seale, secretary; W. H. Lastinger, treasurer; W. E. Hallingsworth, auditor; will establish sugar mill on lands of Kilgore sugar-cane plantations; cost \$100,000.

Tex., Wichita Falls—Culvert Pipe, etc.—Texas Road Supply Co. (recently reported incorporated under "Miscellaneous Enterprises" with \$10,000 capital stock) will manufacture water-tight flume and corrugated-iron culvert pipe from one inch to six inches in diameter; daily capacity 250 linear feet of pipe; building erected; E. W. Pyle, president and manager; William M. McGregor, vice-president; Charles R. Hime, secretary-treasurer.

Tex., Wichita Falls—Automobiles.—Company will be organized with \$100,000 capital stock by J. G. Culbertson and others to establish plant to manufacture automobile trucks, etc.; will construct building.

Tex., Wichita Falls—Mattresses, etc.—Freear Brin Furniture Co. will install machinery for manufacturing mattresses; will also manufacture excelsior for use in plant.

Va., Petersburg—Trunks.—Geo. S. Bernard, Jr., Herbert Rogers and Alvin Wells will establish trunk factory on South St.

Va., Roanoke—Plate Glass.—Frank Winnickie, High Point, N. C., will not establish plate-glass factory. (Recent report an error.)

Va., Roanoke—Overalls.—Roanoke Overall Co. awarded contract at \$10,774 to Herringdon & Normyle, 407 Terry Bldg., Roanoke, for erection of overall factory; two stories; 155x66 feet; brick and mill construction; plans by H. M. Miller, Roanoke. (Recently noted.)

Va., Roanoke—Gas Plant.—Roanoke Gas & Water Co. will organize two separate corporations: one to operate water plant, the other to operate gas plant; will expend \$150,000 for improvements to latter plant, including construction of gasholder; capacity, 750,000 feet of gas. (See "Machinery Wanted.")

W. Va., Nemours.—E. I. Du Pont De Nemours Powder Co., Wilmington, Del., will improve plant, including installation of magazine and press.

W. Va., Wheeling—Grate Bars, etc.—Denler Manufacturing Co. incorporated with \$10,000 capital stock by W. L. Denler, Jacob Loomis, Charles E. Lynn and others.

W. Va., Wayne—Gasoline.—Belvard Oil & Gas Co., B. J. Pritchard, manager (recently noted to establish gasoline factory) will erect fireproof building; also install pipe line from wells to Wayne; further plans not announced.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, SHEDS, ETC.

Ky., Ferguson, P. O. Somerset.—Cincinnati, New Orleans & Texas Pacific Railway (Queen and Crescent Route), C. Dougherty, engineer maintenance of way, Cincinnati, O., has, it is reported, appropriated \$70,000 for extension of shops; improvements to be made in mechanical and car departments. (Recently mentioned.)

Tex., Beaumont.—St. Louis & San Francisco Railroad, J. H. Elliott, general manager, St. Louis, Mo., will, it is reported, construct terminal facilities, including freight and passenger station; plans being prepared; estimated cost \$500,000; site comprises about 25 acres. Mr. Elliott telegraphs Manufacturers Record that details have not been determined.

W. Va., Brooklyn, P. O. New Martinsville.—Baltimore & Ohio Railroad Co., A. W. Thompson, chief engineer, Baltimore, Md., will not erect roundhouse recently noted.

ROAD AND STREET WORK

Ala., Montgomery.—City Council awarded following contracts for paving; Jameson & Halliwell, sidewalks on Mildred St. between Mobile and Cleveland Ave., hexagon tile; Jameson & Halliwell, sidewalks on Sayre St. between Jefferson Davis Ave. and point 250 feet north, hexagon tile; J. S. Coniff & Co., sidewalks on Union St. between Washington and Adams, hexagon tile; Robert Woolfolk, gravel roadway of Clanton St. from McDonough to Perry.

Fla., Brooksville.—City will vote January 17 on issuance of \$7000 of bonds for street paving; Frederick L. Stringer, Mayor.

Ga., Lagrange.—Troup County Commissioners engaged Solomon-Norcross Company, Atlanta, Ga., to supervise construction of roads, for which \$200,000 bond issue was recently reported voted; will construct 153

miles of sand-clay roads; has awarded contracts for building 15 miles of road; ultimate expenditure of \$500,000 is contemplated; W. T. Tuggle, clerk.

La., Colfax.—Grant parish contemplates 15 to 20 miles of road; will ask State to appropriate \$25,000 to \$40,000. Address Police Jury.

Miss., Aberdeen.—City will not let contracts for paving until spring; cost \$50,000; will also expend \$50,000 to construct road leading into Aberdeen; J. M. Acker, Mayor. (Recently noted.)

N. C., Elizabeth City.—City will pave streets with asphalt, brick or Belgian block; bids received until January 2; Z. Fearing, Mayor. (See "Machinery Wanted.")

N. C., Wilmington.—City awarded contract to Bowe & Page, Charleston, S. C., to pave 5570 square yards of street with cement gravel; contract price, 69½ cents per square yard; total amount of paving proposed is 4250 square yards; contract for balance will be awarded later; C. R. Humphreys, engineer. (Recently mentioned.)

Okla., Oklahoma City.—City will grade 15th, 14th, 13th, 12th, 11th and other streets; bids received until January 9; Bob Parman, City Clerk. (See "Machinery Wanted.")

Okla., Shawnee.—City Council has revoked contract recently awarded for paving certain streets and instructed City Clerk to again advertise for bids. Address The Mayor.

Tenn., Nashville.—City will begin in January construction of proposed Capitol Blvd., to extend from Church St. to Capitol grounds; estimated cost, \$12,000; W. W. Southgate, City Engineer.

Tex., Greenville.—City will soon begin paving about 10 miles of streets, for which \$100,000 bond issue has been authorized. Address The Mayor.

Tex., Lufkin.—City will pave sidewalks. Address The Mayor.

Tex., Martindale.—Precinct No. 2 of Caldwell county awarded contract to Van B. Flowers, Lockhart, Tex., at \$1500 per mile to construct 3½ miles of gravel road; \$25,000 bond issue has been voted. (Recently reported under Lockhart, Tex.)

Tex., Temple.—City will construct 6235 square yards of pavement on N. Main St. and W. French Ave.; bids, opened December 27, submitted on brick on concrete, wood block on concrete, bitulithic on concrete, rock asphalt on concrete and Hassam concrete; M. O. Woodward, City Secretary. (Recently mentioned. See "Machinery, etc., Wanted.")

Tex., Wichita Falls.—City Council invites bids until January 11 for paving business district; various kinds of paving will be considered. Address The Mayor.

Tex., Seguin.—City will rebuild principal streets. Address The Mayor.

Va., Portsmouth.—Bids will be received at office of Clerk of Norfolk County until January 2 for macadamizing three miles of road from Tanner's Creek Cross-Roads to Ocean View; Alvah H. Martin, chairman Permanent Road Improvement Commission; Wm. G. Brown, engineer in charge, 606 Linden Ave. (See "Machinery Wanted.")

Va., Richmond.—City has awarded contracts and begun curbing and guttering 8th St. from McDonough to Stockton, and Stockton St. from 4th to 14th, in Southside; \$15,000 appropriated; Charles E. Bolling, City Engineer.

Va., Richmond.—City will grade and gravel certain streets; bids opened December 28; Charles E. Bolling, City Engineer. (See "Machinery Wanted.")

SEWER CONSTRUCTION

Ala., Birmingham.—City awarded contract to J. W. Gurley & Co., Mobile, Ala., to construct storm-sewer system for north side of city; cost about \$300,000; Maury Nicholson, City Engineer. (Recently mentioned.)

Ala., Mobile.—City contemplates construction of system of storm-water drains to begin at Broad and Dauphin Sts.; Wright Smith, City Engineer.

Ga., Atlanta.—City Council awarded contract to Chester A. Dady, Brooklyn, N. Y., at \$155,363 to construct Peachtree Creek disposal plant; Hering & Fuller, 170 Broadway, New York, are consulting engineers; R. M. Clayton, City Engineer. (Recently mentioned.)

Ga., Dalton.—City awarded contract to Haig & Puryear of Dalton to construct nine miles of additional sanitary sewer; contract price, \$28,700; H. S. Jaudon Engineering Co., Savannah and Atlanta, Ga., is in charge. (Recently mentioned.)

Ky., Louisville.—Board of Public Works awarded following contracts for construction

of sewers: Park Ave., between 6th and 7th Sts., and Brook St., between Avery and Lee Sts., R. D. Smith & Co., \$3000; Jefferson St., between Clay and Shelby Sts., and Baxter Ave., between Rogers St. and Broadway, L. W. Hancock & Co., \$3200; Green St., between Clay and Hancock Sts., and Herp Ave., between Bardtown Rd. and Tyler Park, L. R. Figg & Co., \$3800; contractors all of Louisville.

Mo., Joplin.—City Council will consider ordinance authorizing election to vote on issuance of \$50,000 of bonds for construction of septic tank sewerage system in South Joplin; J. B. Hodgdon, City Engineer.

N. C., Charlotte.—Water Commissioners recommended to Board of Aldermen extension of sewer system; Joseph Firth, City Engineer.

N. C., Durham.—Board of Aldermen will petition General Assembly of North Carolina for authority to vote on issuance of \$300,000 worth of bonds for extension to sewer system. Address The Mayor.

Okla., Shawnee.—City will construct lateral sewers; bids invited; cost about \$5000. Address The Mayor.

Tenn., Binghamton.—Town will construct about 3500 feet of sanitary sewers from 6 to 10 inches in diameter; C. A. Price, chairman Sewerage Commissioners, will receive bids until January 3; J. A. Omberg, Jr., engineer, 1606 Exchange Bldg., Memphis, Tenn. (See "Machinery Wanted.")

Tex., Dallas.—City Commission awarded contract to J. C. Underwood of Dallas at \$32,000 to construct sewer in South Dallas from Fair Grounds to Trinity River; pipe to be 24 inches in diameter.

Tex., El Campo.—City awarded contract to Hicks & Lehland of El Campo to construct sewer system, comprising 2500 feet of 12-inch, 2100 feet of 8-inch, 3000 feet of 6-inch pipe and septic tank; estimated cost, \$3650; W. A. Hiddleston, City Clerk. (Recently mentioned.)

Tex., Wichita Falls.—City will construct storm sewers in business district prior to commencement of paving; sewers to range from 20 to 60 inches; bids opened December 27. Address The Mayor.

Tex., Wichita Falls.—City will construct storm sewers in business district; bids opened December 27. Address The Mayor.

Va., Richmond.—City will construct sewers; bids opened December 28; Charles E. Bolling, City Engineer. (See "Machinery Wanted.")

Va., Richmond.—City Council apportioned \$16,325 from bond issue for construction of following sewers: Sewer in alley from Sheppard to West St., between Park and Monument Aves., on West to Franklin St., and along Franklin St. to Cleveland, and in Cleveland to Monument Ave.; cost \$5665; sewer in Sheppard St. from Cary to alley south of Taylor St., cost \$3300; sewer in alley between Park and Monument Aves. from West St. to Rosemeath Rd., cost \$4000; sewer in alley north of Leonard St. between West Ave. and Rosemeath Rd., to cost \$3370. Charles E. Bolling, City Engineer.

TELEPHONE SYSTEMS

Ky., Maceo.—Maceo Home Telephone Co., incorporated with \$15,000 capital stock by B. W. Hawes, Louis Gerlison, Z. T. Perkins and others.

Miss., Orett.—Cumberland Telephone Co., Leland Hume, general manager, Nashville, Tenn., will establish telephone system.

Okla., Bill.—Bill Farmers' Telephone Co. increased capital stock from \$1000 to \$5000.

Va., Dugspur.—Burk's Fork Telephone Co. incorporated with \$5000 capital stock; W. S. Cox, president; J. A. Goad, secretary-treasurer.

TEXTILE MILLS

Ala., Oxford.—Cotton Rope, etc.—Planters' Mfg. Co. will, it is reported, double capacity of plant; now has 2500 mule spindles, 1000 mule spindles, etc.

Ga., Fort Valley.—Cotton Yarns.—Fort Valley Yarn Mill bought in by R. J. Taylor of Macon, Ga.; will operate as Fort Valley Cotton Mills with A. J. Evans as general manager; has 3500 spindles, etc.

Mo., St. Louis.—Bleachery.—Lowell Bleachery, Lowell, Mass., telegraphs Manufacturers Record it contemplates building branch plant; has option on site; nothing definite determined.

N. C., Concord.—Cotton Yarns.—Roberta Mfg. Co. will, it is reported, rebuild cotton-yarn mill reported burned; had 4000 ring spindles, etc.

N. C., Elizabeth City.—Knit Goods.—J. T.

Lewis of Washington, N. C., is reported as interested in establishing knitting mill.

N. C., Newton.—Cotton Cloth.—Newton Cotton Mills will build addition and install 65 looms for weaving cloth; now has 8000 ring spindles for producing yarns.

S. C., Greenville.—Fine Cotton Goods.—Ellison A. Smyth and J. Adger Smyth, Jr., propose organization of \$1,000,000 corporation to build mill of 50,000 spindles and 1500 looms for manufacturing fine cotton goods.

S. C., Jonesville.—Knit Goods.—M. R. Sams of Union, S. C., plans organization of knit goods manufacturing company.

Tenn., Chattanooga.—Hosiery.—Davis Hosiery Mills, through Architects Huntington & Sears, James Bldg., Chattanooga, awarded contract to Chambers & Son of Chattanooga for erection of addition; two stories; 40x65 feet; brick construction; cost about \$4000. (Lately mentioned.)

WATER-WORKS

Fla., Chipley.—City awarded contract to Moore & Gammon of Chipley to rebuild water-works; estimated cost, \$20,000.

Fla., Pensacola.—City Council awarded contract to American Cast Iron Pipe Co., Birmingham, Ala., for extension of 18,000 feet of 6-inch cast iron water mains; construction under supervision of Water Department; contracts for hydrants and lead awarded to Ahrens & Ott, and for water gate valves to Fairbanks Company, both of New Orleans, La.

Ga., Macon.—City Council has reduced amount of bond issue for purchase and improvement of water-works from \$1,000,000 to \$300,000; election will be held March 18; \$850,000 will be expended for purchase of system and balance for extension and improvement; John T. Moore, Mayor. (Recently mentioned.)

Ky., Lexington.—Prison Commission and Lexington Water Co. have arranged for construction of pipe line 22,000 feet long to Reform School; \$5000 appropriated by Legislature.

N. C., Asheville.—Buckeye Water Co. (which supplies West Asheville with water) will lay additional pipe lines and construct storage reservoir.

N. C., Black Mountain.—Blue Ridge Association for Christian Conference has engaged C. E. Waddell, Asheville, N. C., as engineer in charge of construction of water-works and lighting plant to be erected in connection with other buildings for Young Men's Christian Association and Young People's Missionary Movement. (Previously noted. Also see "Schools.")

N. C., Charlotte.—Water Commissioners recommended to Board of Aldermen construction of pipe to Catawba River to furnish additional water supply; about 10,000,000 gallons daily; cost \$275,000 to \$300,000; Joseph Firth, City Engineer.

N. C., Charlotte.—Barium Springs Orphanage will expend \$8000 to construct water, light and sewerage system recently noted; capacity of water-works, 24,000 gallons; has purchased tower, tank and pumps; will install 2500 feet of 4-inch water mains, 2500 feet of 6-inch and 1000 feet of 4-inch sewer mains; J. C. Steele, Statesville, N. C., member of committee. (See "Machinery Wanted.")

N. C., Durham.—Board of Aldermen will petition General Assembly at next session for authority to vote on issuance of \$500,000 worth of bonds for purchase and improvement of water-works. Address The Mayor.

Okla., Ada.—City voted issuance of \$100,000 of bonds for extension of water-works; purchased lake in mountains 15 miles from city; will construct reservoir and pipe water. Address The Mayor. (Recently mentioned.)

Okla., Lamont.—City will call for new vote on issuance of \$17,000 of bonds for construction of water-works recently noted; W. F. Porter, City Clerk.

Okla., Oklahoma City.—Alexander Potter of New York submitted report to City Council recommending expenditure of \$1,250,000 for increasing water supply; proposed that water be secured from North Canadian River; reinforced-concrete dam 1000 feet long and maximum height of 32 feet be constructed along river about eight miles west of present water-works station; capacity of reservoir, 7,500,000,000 gallons; lake, 1½ miles wide for about two miles of length; water to be conveyed from reservoir to city pumping station by conduit eight miles long; total estimated cost of reservoir, dam, pipe line, purification plant, etc., \$1,100,000; Mayor Lackey will probably call election in January to vote on issuance of \$1,250,000 of bonds as suggested by engineer to cover all contingencies. (Recently mentioned.)

Okla., Stillwell.—City awarded contract to

Southwestern Engineering Co., Oklahoma City, Okla., for construction of water-works; cost \$40,000. (Recently noted to have voted \$40,000 bond issue.)

Okla., Stillwell.—City awarded contract to Southwestern Engineering Co., Oklahoma City, Okla., for construction of water-works; work will commence about January 7 and will be completed in 100 working days. (Bond issue of \$40,000 recently noted voted.)

Tenn., Manchester.—City contemplates issuing \$25,000 worth of bonds for construction of water-works and electric-lighting plant recently noted; E. P. Vaughn, Mayor. (See "Machinery Wanted.")

Tex., Austin.—City rejected all bids for construction of reinforced concrete filtering trenches recently noted; to cost about \$10,000; M. C. Welborn, engineer in charge; G. S. Iredell, City Engineer.

Tex., Brady.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., will, it is reported, construct storage reservoir; dam estimated to cost \$20,000; storage capacity proposed, 60,000,000 gallons.

Tex., Elkhart.—City will vote on issuance of bonds for construction of water-works for fire and domestic purposes; nearby spring will be utilized for water supply; will build water tower. Address The Mayor.

Tex., Port Lavaca.—Committee consisting of C. J. Spital, F. L. Young and others recommends construction of reservoir by damming Linn's Bayou; estimated that reservoir will have capacity of 36,000,000 gallons of water. (Recently mentioned.)

Tex., Stamford.—Stamford Water-works Co. awarded contract to W. J. Cox of Stamford to construct 300,500,000-gallon reservoir; drainage area, 3500 acres; Gurley & Hill, civil engineers, Stamford. (Recently mentioned.)

WOODWORKING PLANTS

Md., Baltimore.—Mantels, etc.—Charles J. F. Steiner Mantel Co., Charles J. F. Steiner, president, has office at 403 Builders' Exchange Bldg.; details in recent item. (See "Machinery Wanted.")

Md., Baltimore.—Hubs, etc.—Baltimore Hub, Wheel & Manufacturing Co., 328 N. Holliday St., is having plans prepared for factory to replace burned plant; new building will be brick; two stories; fireproof; slag roof; local contractors will be invited to submit estimates. (Recently mentioned.)

N. C., High Point.—Furniture.—Samuel B. Coffin Company, recently reported incorporated with \$30,000 capital stock, has contracted for erection of addition to building; cost \$3000; is installing machinery; cost \$9000; G. H. Kerns, president; E. T. Kerns, vice-president; Samuel B. Coffin, secretary-treasurer. (See "Machinery Wanted.")

S. C., Greenville.—Mantels, etc.—Greenville Mantel & Manufacturing Co., recently noted incorporated with \$25,000 capital stock, will erect 45x120-foot building; two stories; ordinary construction; cost \$3000; machinery purchased; will manufacture mantels, show-cases, store and bank fixtures, and special cabinet work.

Tenn., Bluff City.—Furniture.—Bluff City Furniture Manufacturing Co. incorporated with \$3000 capital stock by R. E. Stafford, H. H. Gerling, M. S. Curley and others.

Tenn., Chattanooga.—Curtain Poles.—H. L. Judd & Co. will rebuild burned curtain pole factory; reported cost, about \$20,000.

Tenn., Madisonville.—Chairs.—Madisonville Chair Co. incorporated with \$25,000 capital stock by J. A. Kile, T. E. H. McCroskey, W. H. McCroskey and J. P. Brakelbeld.

Tex., Brownsville.—Sash, etc.—H. L. Fitch will establish plant for manufacturing sash, doors, casings, etc.; building will be 25x53 feet; construction begun.

Va., Portsmouth.—Boxes.—Berkeley Box & Lumber Co., Norfolk, Va., contemplates doubling capacity.

Va., Graham.—Furniture.—J. H. Roberts will establish furniture factory.

Va., Narrows.—Barrels.—Narrows Milling Co. will install machinery to manufacture barrels, slack barrels and nail kegs. (See "Machinery Wanted.")

BURNED

Ark., Homan.—Homan Lumber Co.'s leased sawmill; plant owned by J. C. Brown; estimated loss, \$25,000.

Ala., Castleberry.—P. M. Skinner's cotton gin; loss \$2000.

Ala., Sylacauga.—Alabama Marble Co.'s mill; estimated loss, \$500,000.

Ala., Warrenton, R. F. D. from Gunter'sville.—Watt Smith's cotton gin; loss \$1000.

Ala., Euftala.—Woodridge Bros.' lumber

plant, including sawmill, planing mill, grist mill and drykiln; loss \$4000.

Ark., Black Rock.—M. E. Benson's lumber plant; loss about \$3500.

Ark., Clarendon.—National Cooperage & Woodenware Co.'s drykiln; estimated loss, \$30,000.

Ark., Mammoth Springs.—Crescent Ice Co.'s plant, owned by T. W. Sharp; loss, \$8000.

Ark., Mulberry.—Mulberry Cotton Oil Co.'s oil mill; loss \$80,000.

Ark., Siloam Springs.—Siloam Springs Cold Storage Co.'s plant; loss, \$100,000.

Fla., Jacksonville.—Southern Contracting & Concrete Co.'s main building at 16th and Laura Sts.; loss, \$15,000; H. A. Rau, proprietor.

Fla.—Zuber.—Sumner Lumber Co.'s mill; loss \$75,000 to \$100,000.

Ga., Washington.—M. M. Sims' cotton gin; loss \$3000.

La., Doyle.—S. L. McDonald Mill & Lumber Co.'s plant and lumber yard.

La., New Orleans.—Union Furniture Co.'s building; F. F. Hansell & Co.'s building; Schwartz-Eustis Company's school; total loss \$250,000.

La., New Orleans.—Two buildings at 529-31 and 537-39 Barronne St., owned by La. Baronne Realty Co.; loss, \$75,000 each; building at 521-25 Baronne St., Geo. Denegre, agent; loss, \$75,000.

La., New Iberia.—Segura Sugar Factory's office and two boarding-houses; loss \$10,000.

La., West Monroe.—Riverside Lumber Co.'s four drykilns; loss about \$1500.

Md., Baltimore.—Enterprise Mill & Lumber Co.'s plant at 1409 to 1413 E. Monument St.; temporary office at 318 Law Bldg. (Yesterday's address was an error.)

Md., Cumberland.—Evening Times' plant damaged; loss \$20,000; John W. Avirett, proprietor.

Md., Hagerstown.—Fahney Bros.' building on North Potomac St.; Hotel Franklin; estimated loss, \$50,000.

Md., Ridgeville, R. F. D. from Mount Airy, Edwards' Hotel, owned by W. P. Edwards; loss, \$2000.

Miss., Beulah.—Charles Scott's cotton gin on Scotland Plantation.

Miss., Centerville.—Red Snapper Sauce Co.'s plant; loss \$10,000.

Miss., Clarksdale.—H. L. Ward's cotton gin; loss, \$2200.

Miss., Estabuchie.—M. F. Caraway's store; loss \$7000.

Mo., Malden.—Commercial Hotel, owned by H. B. Spooner; four residences, owned by James Claire and H. P. Kingsolving; loss, \$10,000.

N. C., Concord.—Roberta Mfg. Co.'s cotton-yarn mill of 4064 spindles; loss reported is \$125,000.

N. C., Newbern.—W. F. Hill's store, loss \$5000; N. F. Vincent's store; Hyman Supply Co.'s storehouse; Coca-Cola Co.'s plant; L. F. Taylor's residence; J. O. Baxter's residence; Henry Epling's residence; loss on three latter structures, \$15,000.

N. C., Thomasville.—Cramer Furniture Co.'s plant; estimated loss, \$200,000; Stuart W. Cramer, Charlotte, N. C., is said to be principal stockholder.

Okla., Walters.—English Dry Goods Co.'s store; Mudd Mercantile Co.'s store; loss \$200,000.

Okla., Platter.—Cotton gin owned by E. T. Judd of Pottsboro, Tex.

S. C., Aiken.—E. S. Redd's cotton gin and sawmill.

S. C., Cheraw.—Commercial Hotel, owned by W. H. Melton; loss, \$10,000.

S. C., Dalzell.—J. B. McLaughlin's cotton gin and sawmill.

Tenn., Bradford.—Alexander Bros.' cotton gin; loss \$10,000.

Tenn., Pulaski.—Williams & Hamlett's store at Bass; loss \$41,000.

Tenn., Chattanooga.—Ross-Meehan Co.'s gray-iron foundry; loss estimated at \$20,000.

Tex., Holland.—A. E. Wilkerson's residence; loss \$4000.

Tex., Oakwoods.—Stores owned by N. A. Hickey, Dr. Carter, W. V. Cutler, A. E. Cutler, B. M. Linkster; Oracle Co.'s newspaper plant and other buildings; loss, \$20,000.

Tenn., Cumberland Gap.—Appalachian Hotel, owned by Mrs. Rachael Candler.

Tenn., Jackson.—Jackson Daily Democrat's newspaper plant.

Tex., Bertram.—Star Mercantile Co.'s store.

Tex., Dallas.—Building owned by Zeese Engraving Co. and American Telegraph & Telephone Co., loss \$8500; building occupied by

Bradford Bros.' Grocery Co.'s building, loss \$10,000.

Tex., McKinney.—W. S. Matthews' cotton gin; loss, \$14,000.

Tex., Tascosa.—Fort Worth & Denver City Railway's depot; estimated loss, \$12,000; R. C. Gowdy, chief engineer, Fort Worth, Tex.

Tex., Floydada.—Boener & Nelson's warehouse; Childers Dry Goods Store.

Tex., Mauriceville.—J. M. Hildred's store and hotel.

Tex., Mt. Vernon.—J. N. Rosenberg's cotton gin; loss \$6000.

Va., Machipongo.—G. R. Mapp & Co's sawmill; loss \$4000.

Va., Norfolk.—Independent Order of Odd

Fellows' hall, loss \$100,000; James W. Thompson, custodian, 122 Bank St.

Va., Orkney Springs.—Mountain View Hotel, owned by H. H. Biller.

Va., Richmond.—North wing of Ryland Hall, main building of Richmond College; loss \$60,000.

W. Va., Jacksonburg.—Elks' Hotel and other buildings; loss \$75,000.

W. Va., Jacksonburg.—Elk Hotel; Shiben Bros.' store; Otis Flowers' building; Mrs. M. E. Ribb's store; William Baer's barn; J. C. Hill's warehouse; James Waters' residence; Louis James' residence; Henry Taylor's residence; Oliver Judge's residence; E. H. Cubbin's residence; total loss \$75,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—Coca-Cola Company, 1418 E. St. N. W., will erect building at N. Capitol St. and Massachusetts Ave.; 16 stories; lower floors, cafe, etc.; upper floors for hotel apartments of one to five rooms and bath.

Md., Baltimore.—Frank Cox is having plans prepared by John R. Forsythe, 232 St. Paul St., Baltimore, for apartment-house at Mont Alto; three stories; ornamental frame; slate roof; concrete foundation; electric lights; hot-water heat; vacuum cleaning system.

Md., Baltimore.—J. Frank & E. Bechtel are having plans revised by H. J. Tinley, 314 N. Charles St., Baltimore, for apartment-house at Garrison and Highland Aves.; will receive revised bids in about two weeks; 72x30 feet; brick; two and a half stories; cost \$15,000.

Mo., St. Louis.—Carolina Realty & Building Co. will erect three-story apartment-house; cost \$14,000.

ASSOCIATION AND FRATERNAL

Ga., Macon.—Ancient Free and Accepted Masons will soon receive bids for erection of Masonic Temple; seating capacity 3000; cost \$80,000; plans by Frank R. Happ, Macon. (Previously noted.)

La., Baton Rouge.—Independent Order of Odd Fellows will rebuild lodge building for office and lodge purposes.

Md., Cumberland.—Cumberland Council, No. 586, Knights of Columbus, purchased site, 41x50 feet, and will erect lodge building; cost \$25,000 to \$30,000.

Miss., Richton.—Lodge No. 477, Ancient Free and Accepted Masons, has plans by Mr. Lee, Hattiesburg, Miss., for two-story brick temple.

Tenn., Copperhill.—Lodge No. 433, Free and Accepted Order of Masons, will rebuild Masonic Temple recently reported burned; two stories; 32x70 feet; brick; heaters; electric lighting; cost \$5000; architect not selected.

Va., Norfolk.—Independent Order Odd Fellows will rebuild lodge building reported burned; loss \$100,000; James W. Thompson custodian, 122 Bank St.

BANK AND OFFICE

Ark., Mena.—Planters' State Bank, W. E. Watkins, member of building committee, will expend \$5000 to erect bank building recently noted; 25x75 feet; two stories; brick. (See "Machinery Wanted.")

Ark.-Tex., Texarkana.—W. C. Hardin has plans for combination office and theater building to cost \$100,000. (See "Theaters.")

Ga., Macon.—Walter H. Turpin will erect office and store building; three stories and basement; 52x75 feet; ordinary construction; cost \$15,000. (See "Stores.")

La., Baton Rouge.—J. R. Roumain and associates contemplate erection of office building recently noted.

Md., Frederick.—Frederick Electric Railway Co. has plans and specifications for office building; two stories and basement; brick and stone; 50x50 feet; plans on file at Builders' Exchange, 15 E. Fayette St., Baltimore, Md.; contractors invited to submit bids.

Tex., El Campo.—Citizens' State Bank will open bids about January 2 for erection of bank building recently noted; 30x15 feet; ordinary construction; stone and brick; electric lighting; cost \$8000; plans by Hull & Praeger, Victoria, Tex. Address proposals to architects.

Tex., San Antonio.—Chamber of Commerce has not selected architect to prepare plans

for six or seven story fireproof office building previously noted; electric lighting; cost \$200,000.

Tex., Washington.—First State Bank, M. W. Davenport, president, will erect two-story bank building.

Va., Norfolk.—Henry G. Barbee is promoting erection of building for Board of Trade; structure will be 178x89 feet; stores on first floor; convention hall with seating capacity of 2000 on second floor; estimated cost \$150,000.

Va., Roanoke.—National Exchange Bank will receive plans from following architects for bank building: W. L. Stoddard of New York; Huggins & Bates of Roanoke; H. M. Miller of Roanoke, associated with Wood, Donn & Deming, 808 17th St. N. W., Washington, D. C.; John K. Peebles, Norfolk, Va.; Frye & Chesterman, Lynchburg, Va.; Wyatt & Nolting, Keyser Bldg., Baltimore, Md.; plans to be submitted by May 2; Wm. C. Noland, Richmond, Va., is consulting architect, with whom architects are to confer relative to bidding, in accordance with rules of American Institute of Architects, under supervision of Frank Miles Day, chairman of standing committee on competition; plans to be finally adopted by building board, consisting of J. B. Fishburn, T. W. Goodwin, E. B. Spencer and others; structure will be 50x100 feet, fireproof, and cost \$125,000, exclusive of site. (Recently mentioned.)

CHURCHES

Ala., Birmingham.—Temple Emanuel will soon begin erection of edifice previously mentioned; cost \$75,000; Morris Adler, Leo Stern and M. V. Joseph, committee.

Ala., Enterprise.—Baptist congregation will erect edifice. Address The Pastor, Baptist Church.

Miss., Hattiesburg.—Trinity Episcopal congregation contemplates erecting edifice. Address The Pastor, Trinity Episcopal Church.

Okla., Muskogee.—First Methodist Episcopal Church will open bids January 24 for erection of edifice recently described; 70x105 feet; brick; ordinary construction; cost \$22,000; plans by J. W. Gladdis, Vincennes, Ind.; plumbing, heating plant, electric wiring and art glass contracts let separately; heating plant and plumbing will cost \$2100.

Okla., Norman.—First Presbyterian congregation contemplates erecting edifice to cost \$50,000 to \$60,000. Address The Pastor, First Presbyterian Church.

S. C., Lexington.—Methodist congregation will erect brick edifice recently noted; Samuel B. George, secretary.

Tenn., Knoxville.—Forestdale United Brethren congregation will erect edifice to cost \$15,000. Address The Pastor, Forestdale United Brethren Church.

Tex., Edna.—Methodist Church, J. S. Hawkins, chairman building committee, has not selected architect to prepare plans for edifice recently noted; cost \$15,000.

Tex., Fort Worth.—Christian Church, Rev. L. A. Bogess, pastor, will erect edifice; site 100x150 feet.

Tex., Fort Worth.—Clinton Avenue Baptist Church of North Fort Worth, Rev. R. T. D. Carpenter, pastor, contemplates erecting brick and concrete edifice.

Tex., Houston.—Tabernacle Methodist Church has plans by A. C. Pigg of Houston for edifice; pressed brick; stone trimmings; seating capacity 2000; cost \$30,000 to \$40,000; E. C. Lamb, chairman building committee.

Tex., New Braunfels.—Methodist church, Rev. H. O. Launch, pastor, will erect edifice.

Tex., Pecos.—Southern Presbyterian Church, Rev. A. E. Miller, pastor, has not selected architect to prepare plans for edifice recently

noted; electric lighting; cement sidewalks; cost \$4000.

CITY AND COUNTY

Miss., Meridian.—Fire Station.—City is planning to erect three fire stations and repair Central fire station; I. F. Ethridge, Building Inspector.

Mo., St. Louis.—Engine-house.—Board of Public Improvement will let contract January 6 for erection of engine-house recently noted; 21x49 feet; fireproof construction; steam heat; cost \$3000.

Tex., Weatherford.—City Hall.—City rejected all bids for erection of city hall; plans by F. G. Shaw, 705 First National Bank, Fort Worth, Tex.; W. W. Waldo, chairman of building committee. (Recently noted.)

Va., Richmond.—Police Station.—City will soon award contract for remodeling portion of City Jail for police station; H. P. Beck, building inspector.

COURTHOUSES

Ark., Clarendon.—H. B. Bateman, Commissioner, will receive bids until 2 P. M. January 25 for erection of three-story brick tiled-roof courthouse, including plumbing, wiring and sewerage; certified check for \$500, payable to Mr. Bateman; plans at office of Chas. L. Thompson, architect, Little Rock, Ark., and of Mr. Bateman at Clarendon.

DWELLINGS

Ala., Birmingham.—Leo Loeb will erect bungalow.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., will erect 400 dwellings on Lincoln Ave., Todd Pl. and 2d St. N. E.; six rooms; two stories; furnace heat.

D. C., Washington.—L. E. Breuninger, 1754 Park Rd., will expend \$60,000 to erect 12 dwellings recently noted; three stories and basement; ordinary construction; hot-water heat; gas and electric lighting; concrete sidewalks; plans by A. H. Beers, 1342 New York Ave., Washington; construction by owner; will also erect five dwellings on 28th St. N. W.; 10 rooms and bath; ordinary wood and brick construction.

D. C., Washington.—H. Wardman, 1342 New York Ave., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for two-story frame dwelling at 1402 Delafield Pl. N. W.; cost \$3000.

D. C., Washington.—Joseph M. Carmody, 338 G St. N. E., has plans by H. E. Van Horn, Washington, for six two-story brick dwellings at 800 to 808 C St. N. E.; cost \$12,000; construction by owner.

D. C., Washington.—W. C. Blundon, 51 Rhode Island Ave. N. W., will erect two two-story brick dwellings at 5-7 Rhode Island Ave. N. E.; cost \$10,000; plans and construction by owner.

Fla., Deland.—J. W. Dutton will expend \$20,000 to erect dwelling recently noted; two stories and attic; frame; tile roof; hot-water heat; plans by Cairns & Fitcher, Deland; day labor.

Fla., Tampa.—Philip Shores has plans by Edward A. Nolan, 216 Curry Bldg., Tampa, for dwelling; 32x32 feet; ordinary construction; electric lighting; cost \$4000; address architect.

Ga., Savannah.—Mrs. Emma Lyon will erect residence.

La., Forest Hill.—J. J. Dixon will erect residence.

La., New Orleans.—W. Scott Bryan will erect two-story frame stucco residence; cost \$5200.

Md., Baltimore.—Ten Hills Corporation, Lexington and North Sts., has plans by Glidden & Friz, Glenn Bldg., Baltimore, for dwelling at Ten Hills; two and a half stories; frame and stucco; gas and electric lights; plumbing; cost \$10,000.

Md., Baltimore.—C. B. Burdette, 236 N. Fulton Ave., has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for seven dwellings on north side Strickland St., near Canton Ave.; two stories; 13x28 feet; brick; tin roof; hot-air heat; cost \$8000.

Md., Baltimore.—Charles H. Stoner, 1927 W. Lombard St., has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for seven dwellings on south side Wilhelm St., near Payson St., and six on west side Payson St.; two stories; 13x47 feet; brick; tin roof; hot-air heat; cost \$15,000.

Md., Baltimore.—Clarence Hampson, Frederick Ave., near Wilkins Ave., will build three dwellings on north side Mosher St., near Myrtle Ave.; two stories; 13x42 feet; brick; slag roof; hot-air heat; cost \$3000 each; private plans.

Md., Baltimore.—Baltimore Building Co., 6 E. Lexington St., has plans by J. E. Eckstine,

20 E. Lexington St., Baltimore, for five dwellings; 28x54 feet each; ordinary construction; concrete walks; cost \$5000 each; construction by company.

Md., Fork.—Henry Grauel is having plans prepared by John J. Zink, 2 E. Lexington St., Baltimore, Md., for residence; two and a half stories; frame; stone basing and foundation; cost \$9000.

Md., Woodlawn.—E. Frank Ritter has plans by Roland F. Sauter, 1307 Harlem Ave., Baltimore, Md., for dwelling; ordinary construction; 34x52 feet; cost \$5000; date of opening bids not set.

Mo., St. Louis.—Minnie Wuerst will erect nine two-story dwellings; cost \$22,500.

Mo., St. Louis.—Charles S. Muerth will erect six dwellings; one story; cost \$13,200.

N. C., Durham.—John Sprunt Hill has plans by Kendall, Taylor & Co., Boston, Mass., for dwelling recently noted; two stories; 16 rooms; fireproof construction; reinforced concrete and brick covered with stucco or pebble-dash; red tile roof; direct and indirect steam heat; gas and electric lighting; cost \$45,000; day labor.

N. C., Greensboro.—W. B. Enoch will rebuild dwelling recently reported burned; seven or eight rooms; hot-air or steam heat; cost \$2000; plans and construction by owner.

Tenn., Knoxville.—J. H. Anderson of Anderson-Dulin-Varnell Company is having plans prepared by R. F. Graf & Sons, Knoxville, for residence.

Tex., Dallas.—W. G. Lomax of Waxahachie, Tex., will erect dwelling.

Tex., Houston.—J. I. Macatee will erect eight-room residence; cost \$6000.

Tex., Victoria.—W. H. Smith has plans by Hull & Prager, Victoria, for dwelling recently noted; two stories; six rooms; frame; mill construction; fireplaces; electric fixtures; cost \$3500; bids opened December 23. (See "Machinery Wanted.")

Va., Richmond.—A. Chustello will erect two dwellings; cost \$3500.

Va., Richmond.—H. Salamon will erect 15 two-story brick dwellings; cost \$21,000.

Va., Richmond.—W. H. Brown will erect brick dwelling.

Va., Roanoke.—Green Memorial Methodist Church opened bids for erection of parsonage; Shockey & Fields of Roanoke are lowest bidders and will probably receive contract.

Va., Roanoke.—S. B. Pace will erect residence.

GOVERNMENT AND STATE

Ky., Bowling Green.—Postoffice and Courthouse.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals will be received at this office until 3 P. M. January 23, and then opened, for construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of United States postoffice and courthouse in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Bowling Green, Ky., or at discretion of supervising architect.

Mo., Lexington.—Postoffice.—A. Anderson, St. Louis, Mo., is lowest bidder at \$42,773 for erection of United States postoffice; James Knox Taylor, supervising architect, Treasury Department, Washington, D. C. (Recently mentioned.)

HOTELS

Ala., Tuscaloosa.—R. H. Little has plans by E. J. Ostling & Son (address care of Mr. Little) for two-story brick hotel building.

D. C., Washington.—Commercial Hotel Co. will expend \$200,000 to erect hotel recently noted; 10 stories, basement and subbasement; fireproof construction; high-pressure steam heat; prism sidewalk lights; electric elevator; plans by Frank G. Pierson, 408 Washington Loan & Trust Bldg., Washington; date of opening bids not determined.

La., Shreveport.—Terrell Lively of Marshall, Tex., acquired interest in Caddo Hotel, and will expend \$10,000 for improvements.

Md., Baltimore.—Isaac E. Emerson, 308-12 W. Lombard St., will, it is reported, erect addition to Hotel Emerson (under construction) at 122 E. Baltimore St.; 14 stories; 20x104 feet; Wm. H. Parker, 310 Lombard St., has charge of construction; Jos. E. Sperry, 409 Calvert Bldg., is the architect.

Mo., Joplin.—J. Rowland Sharp and Frank Sharp plan erection of building at 412-14 Main St.; five stories; white stone; cost \$200,000; basement for bakery and kitchen, main floor for cafe and bakery, second floor for cafe, and upper floors for hotel.

Mo., Excelsior Springs.—Elm Realty Co., 530 Scarrett Bldg., Kansas City, Mo., will open bids February 15 for erection of hotel previously noted; 215x215 feet; fireproof construction; high-pressure steam heat; passenger elevator; cost \$200,000; plans by Jackson & McIlvain, Kansas City, Mo.

N. C., Albemarle.—James and Zeb. Moss will erect \$20,000 hotel.

N. C., Black Mountain.—Blue Ridge Association, C. H. Hobbs, chairman of committee, Asheville, N. C., has plans by Louis E. Jallade, 1170 Broadway, New York, for hotel previously noted; 400 rooms, with administration building, offices, etc. (See "Schools.")

N. C., Charlotte.—J. T. Sanders has plans by W. S. Pitman, Washington, N. C., for remodeling hotel, including new front and additional story of 14 extra rooms.

Tex., Wellington.—M. W. Davenport, L. W. Gribble, H. C. Wells, D. D. McDowell and others will erect two-story hotel; frontage 50 feet; two 20-foot stores in rear.

W. Va., Huntington.—Consolidated Realty Co. has plans by R. L. Day and S. W. Jackson, Huntington, for hotel, store and office building recently noted; three stories; 60x185 feet; ordinary brick construction; cost \$25,000. (See "Machinery Wanted.")

MISCELLANEOUS

Ark., Hot Springs.—Bathhouse.—Rammelsberg Baths, Gilbert E. Hogaboom, manager, will erect modern bathhouse; construction on percentage basis; marble, floor tile, plate glass, enamels, enameled furniture, mechanical ventilation, pressed-steel doors and window frames, steel lockers, heating systems, bathroom accessories (nickel-plated brass and white metal), vacuum cleaning, etc. (See "Machinery Wanted.")

D. C., Washington.—Building.—International Reform Bureau, Dr. Willbur F. Crafts, secretary, 206 Pennsylvania Ave. S. E., will erect building to cost \$250,000.

Fla., Johnstown.—Administration Building. Florida Farm & Home Co., S. A. Watson, president, 319 Clark Bldg., Jacksonville, Fla., will erect administration building. (See "Land Developments.")

Md., Baltimore.—Hospital.—Children's Hospital School, Dr. Wm. S. Baer, 4 E. Madison St., will erect hospital buildings; first structure to cost about \$20,000; character of construction not decided.

S. C., Charleston.—Grandstand.—James Sotile, manager of aviation meet, awarded contract to C. Kanapaux & Co. of Charleston to erect grandstand seating 7000; plans prepared by D. C. Barbot of Charleston; Mr. Page of Bowe & Page, contractors, Charleston, to build hard and smooth track 2000 feet long and 25 feet wide.

N. C., Durham.—Home.—North Carolina Children's Home Society, W. B. Streeter, superintendent, Greensboro, N. C., will erect \$30,000 building; concrete; fireproof.

Tex., Dallas.—Clubhouse.—Dallas Golf Club Realty Co. will erect clubhouse; two stories and basement; brick; cost about \$75,000; preliminary plans prepared by C. D. Hill & Co. of Dallas.

Tex., Denison.—Clubhouse.—Denison Rod & Gun Club will erect clubhouse to cost \$6000.

Tex., Galveston.—Pavilion.—McGuire Park Co. (Robert McGuire and others) contemplates erecting pavilion to cost about \$5000.

Tex., Galveston.—Car Barns.—Galveston Electric Co. and Galveston-Houston Interurban, L. C. Bradley, general manager, have plans and specifications completed for car barns to be erected at Broadway and 51st St., and are about ready to submit to bidders; reported that structures will be of concrete and steel.

Tex., Toga.—Sanitarium.—Toga Sanitarium Water Co. incorporated with \$250,000 capital stock by Z. L. Wright, A. L. Windham, M. E. Hindman and others.

RAILWAY STATIONS

Ark., Helena.—St. Louis, Iron Mountain & Southern Railway, M. L. Byers, chief engineer, St. Louis, Mo., contemplates, it is reported, erection of \$25,000 terminal station.

Ky., Newport.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., and Chesapeake & Ohio Railway, F. I. Cabell, chief engineer, Richmond, Va., are reported as to erect joint depot.

Okl., Poteau.—Kansas City Southern Railway, A. F. Rust, resident engineer, Kansas City, Mo., will, it is reported, erect depot.

S. C., Chester.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will erect passenger station; 123 feet long and

20 feet wide, with shed 39x115 feet; brick with tile roof; roof of shed also of tile; will be used jointly by Southern, Carolina & Northwestern and Lancaster & Chester railways.

S. C., Charleston.—Charleston Union Station Co. contemplates, it is reported, constructing additional umbrella sheds to main shed of passenger depot.

Tex., Beaumont.—St. Louis & San Francisco Railroad, J. H. Elliott, general manager, St. Louis, Mo., will, it is reported, erect freight and passenger station, etc. (See "Railway Shops, Terminals, Roundhouses, Sheds, etc.")

Tex., Galveston.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, has preliminary plans by E. A. Harrison, architect of Atchison, Topeka & Santa Fe system, Topeka, Kans., for proposed union station, estimated to cost \$200,000; general waiting-room will be 64x100 feet; present union station will comprise about one-third of entire building, and will form extreme north wing.

SCHOOLS

Ga., Monroe.—City plans issuance of \$13,000 to \$15,000 of bonds to erect school. Address Board of Education.

Md., Baltimore.—City has plans by Baldwin & Pennington, Professional Bldg., Baltimore, for buildings of the Polytechnic Institute, on North Ave., opposite Guilford Ave.; three stories; stone; 71x162 feet; two wings, 15x60 feet each; boilers; engines; electric equipment; bids received for construction early in January; whole cost, \$400,000; Henry Adams, engineer in charge, \$59 Calvert Bldg.

Mo., St. Louis.—Board of Education will construct portable schools at Klemm and Shaw Aves.

N. C., Black Mountain.—Blue Ridge Association, C. H. Hobbs, chairman of committee, Asheville, N. C., has plans by Louis E. Jallade, 1170 Broadway, New York, for buildings to be erected on 854 acres of land recently noted purchased for summer school and conferences; to include hotel, auditorium, gymnasium, etc.; cost \$90,000; Charles E. Waddell, 78 Patton Ave., Asheville, N. C., is engineer in charge of construction of electric-light plant, water-works and grounds.

N. C., Black Mountain.—Blue Ridge Association has plans by L. E. Jallade, 37 Liberty St., and associates, and Loula A. Abramson, both of New York, for proposed buildings, including Robert E. Lee hall, to cost \$37,500; auditorium, \$7500; gymnasium, \$5000; 10 cottages, \$5000, etc.; hall to accommodate 400 students and dining-room to seat 600; electric lights from private plant; steam heat; hall, auditorium and gymnasium connected by colonnade. (Recently noted.)

Okl., Clinton.—School Board plans erection of \$25,000 school.

Okl., El Reno.—Father Constantineau of San Antonio, Tex., proposes erection of academic school at Admire and Russell Sts.; cost \$14,000; Dick Lyons, T. J. Rasp, C. R. Miller and others, building committee.

Baltimore. (Previously mentioned.)

Tex., Austin.—W. J. Matthews, president of School Board, will receive bids until January 10 for erection of two schools at Hyde Park and South Austin; brick and stone; certified check for \$1000, payable to Mr. Matthews; separate bids for installation of steam-heating system; plans and specifications at office of Endress & Walsh, architects, Bosche Bldg., Austin, or plans for either may be had on deposit of \$10. (See "Machinery Wanted.")

Tex., Donna.—Board of Education will rebuild school building recently noted burned; eight rooms; brick; stoves; cost \$9000. Address Collier & Hester for further information.

Tex., Greenville.—City selected architect to prepare plans for \$70,000 high-school building. Address The Mayor. (Previously noted.)

Tex., Pecos.—School District No. 1, Reeves county, has plans by W. H. Kelly, Pecos, for school building recently noted; 12 rooms; fireproof construction; steam heat; electric lighting; cement sidewalks; cost \$20,000; date of opening bids not set.

Va., Bristol.—Virginia Institute, J. T. Henderson, president, is planning number of improvements.

Va., Lynchburg.—Elton District School Trustees have plans for school; two stories; brick; eight rooms.

Va., Richmond.—St. Peter's Church, Rev. J. J. Bowler, pastor, will not at present erect parish school recently noted.

W. Va., Bethany.—Bethany College has plans by H. C. Franzheim, Wheeling, W. Va.,

for science hall recently noted; 110x50 feet; fireproof construction; central heating plant; cost \$30,000.

STORES

Ala., Montgomery.—N. J. Bell will not at present erect store building recently noted.

Ala., New Decatur.—C. H. Austin will erect store building to be occupied by Hughes & Tidwell Supply Co.; 50x60 feet; ordinary construction; cost \$10,000; day labor. (Recently noted.)

Fla., Jacksonville.—St. Elmo W. Acosta will erect two-story frame building; cost, \$2500.

Fla., Tampa.—J. S. Goodbread has plans by Edward A. Nolan, Tampa, for store; 35x67 feet; ordinary construction; electric lighting; cost \$5000. Address proposals to Mr. Nolan, 216 Curry Bldg.

Ga., Macon.—B. T. Adams will erect number of stores and warehouses on Poplar and 5th Sts.

Ga., Macon.—Walter H. Turpin will open bids January 2 for erection of store and office building; 53x75 feet; three stories and basement; cost \$15,000; plans by Frank R. Hupp, Macon.

La., Lake Charles.—S. H. Kress Company, 396 Broadway, New York, will erect three-story brick store building on Ryan St.

La., New Orleans.—George Denegre, agent, will probably rebuild structure reported burned; loss \$75,000.

La., New Orleans.—La Barrone Realty Co., Emilie Perrin, president, will erect four business buildings to replace burned structures; fireproof construction; at least five stories; sprinkler systems.

Miss., Estabuchie.—M. F. Carraway will rebuild store building reported burned; plans not definite.

N. C., Charlotte.—J. T. Sanders will erect store and office building; four stories; contain 21 offices; pressed-brick front; steam heat.

N. C., Wilmington.—D. R. Foster and J. Holmes Davis have plans by J. Leitner, Wilmington, for business building; 17x85 feet; two or three stories; first floor store, upper floor for offices.

Tenn., Memphis.—Henry Loeb & Co. will erect business building.

Tex., Alvin.—T. C. Edwards has plans by Otto Redaker (address, care of Mr. Edwards) for store building recently noted; three stories; brick; electric lighting; cement sidewalks; cost \$10,000.

Tex., Fort Worth.—W. A. Darier will erect building for Duke & Ayres; cost \$6000.

Tex., Lockhart.—Masur Bros. will erect two-story store building.

Tex., Mount Pleasant.—M. Gillespie will erect three-story brick business building.

Tex., Texarkana.—Ray Kosminsky will erect three-story brick business building.

Tex., Victoria.—Theodore Buhler and J. F. Welder will erect brick building to be occupied as feed store by A. W. Pickering.

Tex., Waco.—H. W. Smith will receive bids until 2 P. M. January 5 for erection of four-story-and-basement brick building to be occupied by Waco Wholesale Drug Co.; plans and specifications at office of Scott & Pearson, architects, Waco Loan & Trust Bldg., Waco. (Previously noted.)

Tex., Waco.—P. G. Taylor & Co. will erect store building.

Va., Newport News.—Daniel Berlin, 557 23d St., will erect store building.

Va., Wytheville.—Humphreys-Davidson Hardware Co. contemplates erection of brick store building; 50x78 feet; three stories; plate-glass front. (See "Machinery Wanted.")

W. Va., Huntington.—Consolidated Realty Co. has plans by R. L. Day & S. W. Jackson, Huntington, for store, hotel and office building recently noted; 60x185 feet. (See "Hotels.")

THEATERS

Ark.-Tex., Texarkana.—W. C. Hardin has plans for theater and office building at 3d and State Sts.; front (four stories) for offices; rear (three stories) for theater; cost \$100,000.

Tex., San Antonio.—Plaza Theater Co. organized to erect theater; seating capacity, 1200.

Tex., Galveston.—Leon Brownie, 916 21st St., is interested in erection of combination skating rink, bowling alley, dancing pavilion, restaurant, vaudeville theater and roof garden; two stories; stucco construction; cost \$14,000.

Va., Richmond.—M. L. Hofheimer has add-

ed to plans by Scarborough & Howell, Richmond, for theater; 130x50 feet; steel and concrete fireproof balcony; seating capacity 1100, exclusive of boxes; boiler-rooms enclosed in brick walls; cost \$23,500; construction in progress. (Previously noted.)

WAREHOUSES

Ark., Stuttgart.—Stuttgart Rice Warehouse Co., recently reported incorporated with \$50,000 capital stock, will erect 96x150-foot rice storage warehouse; ordinary construction;

cost \$15,000; date of opening bids not set; will install rice-cleaning machinery and power.

Ga., Macon.—B. T. Adams purchased property for \$50,000 on which he contemplates erecting warehouses and stores.

Tex., Victoria.—W. L. Sutherland is interested in erection of galvanized-iron warehouse 54x48 feet.

Tex., Victoria.—Victoria Safe & Lock Co. is having plans prepared by Julius Leffland of Victoria for warehouse; one story; brick.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ga., Augusta.—H. H. Clausen awarded contract for erection of two-story apartment-house recently noted; ordinary construction; gas and electric lighting; cost \$7400; plans by G. Lloyd Preacher, Augusta.

N. C., Wilmington.—M. L. Starkey awarded contract to Mr. Rose, Goldsboro, N. C., for remodeling building on Princess, between Water and Front Sts., for store and apartment building; pressed brick-stucco finish; stone trimmings; plate-glass windows, with tops of prism glass; stores on first floor, second and third floors for apartments; cost, \$10,000; plans by H. E. Bonitz, Wilmington.

CHURCHES

Ala., Bessemer.—First Methodist Episcopal Church will expend \$40,000 to erect edifice; 105x132 feet; mill construction; steam heat; gas and electric lighting; plans by P. J. Le Belle, 338 Hood Bldg., Birmingham, Ala.; contract recently noted awarded to Coston & Rogers, Bessemer.

Miss., Indianola.—Baptist church awarded contract to McInnis & Co., Greenwood, Miss., at \$12,000 to erect edifice; cost when completed about \$20,000.

CITY AND COUNTY

Ga., Atlanta.—City Hall.—City awarded contract at \$33,049 to D. C. Allen, Atlanta, to remodel building for city hall; plans by A. Ten Eyck Brown, Atlanta. (Recently noted.)

COURTHOUSES

Okla., Tulsa.—Tulsa County Commissioners awarded contract at \$176,461 to Van Horn & Son, Tulsa, for erection of courthouse; stone construction; cost, including furnishings, \$225,000; plans by Winkler & MacDonald, Tulsa.

DWELLINGS

Ala., Birmingham.—Ensley Land Co. awarded contract to Charles M. Allen, Birmingham, for erection of 18 dwellings; cost \$50,000; plans by William Leslie Welton, Birmingham. (Recently noted.)

Ala., Corey (P. O. Birmingham).—John C. Lusk awarded contract to J. H. Cooper & Sons (address care of Mr. Lusk) for erection of two-story bungalow; plans by William L. Welton, 1289 Empire Bldg., Birmingham.

Fla., Tampa.—C. W. Bahrt awarded contract to D. B. Webb, Tampa, for erection of dwelling recently noted; two stories; eight rooms; cost \$3100; plans by E. A. Nolan, Tampa.

Md., Sherwood, P. O. Rider.—Henry S. King (not Henry Smith, as recently reported), president Security Storage & Trust Co., 1349 W. North Ave., Baltimore, Md., awarded contract to W. T. Childs, 16 W. 20th St., Baltimore, Md., for erection of dwelling; two and a half stories; stone and shingle; cost \$9000 to \$8000.

GOVERNMENT AND STATE

Md., Annapolis.—Athletic Stand.—William N. French of Annapolis has contract at \$2039 for foundation of athletic stand at Naval Academy; 51 feet 9 inches by 46 feet; structure will be of steel, with capacity for 10,000, and cost \$22,000. (Recently mentioned.)

Tex., Denison.—Government awarded contract to Fell & Almsworth, Waco, Tex., at \$37,117 additional to original contract for erection of Federal building.

HOTELS

Ala., Bay Minette.—Mrs. Mary T. Hamilton awarded contract to E. S. Liles, Brewton, Ala., for erection of hotel; 36x36 feet; fireproof construction; heating plant to cost \$3000; cement sidewalks. (Recently noted.)

Tex., Browns Wells, R. F. D. from Wesson. J. F. Barnes of Jackson, Miss., has contract for erection of 50-room hotel; plans by Thomas Sully, New Orleans, La.

MISCELLANEOUS

Md., Sparks Station (not a postoffice).—Poultry Sheds.—Joseph S. Wolloughby awarded contract to Jacob L. Fowle, Timonium, Md., for erection of two out buildings recently noted; 68x22 feet and 25x29 feet; frame; concrete foundation; hot-water heat; plans by Emory Nussner, 415 Professional Bldg., Baltimore, Md.

RAILWAY STATIONS

Ga., Lagrange.—Atlanta & West Point Railroad, C. A. Wickersham, general manager, Atlanta, Ga., has, it is reported, awarded contract for rebuilding burned depot.

SCHOOLS

Ga., Eastman.—City awarded contract to S. J. Hargrove & Co., Eastman, for erection of school building. (Previously noted to have voted \$20,000 bond issue for schools and sewerage.)

Okla., Kingfisher.—School Board awarded contract at \$12,005.25 to C. E. Sockler, Kingfisher, for erection of high-school building, and at \$1620.84 to Banker Bros. for plumbing, heating and wiring.

STORES

Miss., Cleveland.—C. R. Smith awarded contract to J. T. Mansfield, Cleveland, for erection of three brick business buildings; construction begun.

Mo., Keota.—Keota Drug Co. has plans by and awarded contract to C. E. Solter Keota, for erection of store building recently reported burned; 36x60 feet; mill construction; heating and lighting not decided.

N. C., Wilmington.—M. L. Starkey awarded contract for remodeling building for store and apartments. (See "Apartment Houses.")

S. C., Columbia.—Mrs. L. E. Rivers awarded contract to Weston & Brooker, 1422 Main St., Columbia, for erection of store and apartment building; 54x64 feet; ordinary construction; brick; cost, \$9000; plans by A. W. Hammy, Columbia. (Recently noted.)

Tex., Kopperl.—James H. Burnett has plans by and awarded contract to Joseph H. Hamilton (address care of Mr. Burnett) for erection of store building recently noted; 23x20 feet; practically fireproof construction; cost \$1800.

Tex., Kopperl.—S. R. Carruth awarded contract to J. H. Hamilton, Dallas, Tex., for erection of business block recently noted; to contain five stores; 60x115 feet; ordinary construction; cost \$2000 each.

Tex., Taylor.—Geo. W. Glendening awarded contract for erection of business building; one story; brick.

Va., Newport News.—C. B. & W. J. Nelms awarded contract to E. E. Piland, Newport News, for erection of store building recently noted; 25x60 feet; ordinary construction; electric lighting; cost, \$3450.

WAREHOUSES

Fla., St. Petersburg.—M. L. Stoner & Co. will expend \$4500 to erect warehouse; 48x75 feet; ordinary brick construction; electric lighting; plans by Edgar Ferdon, St. Petersburg; contract recently noted awarded to Eureka Stone & Paving Co., St. Petersburg; material purchased.

Dalton Adding Machines.

In order to meet the constantly increasing demand for its adding, listing and calculating machines the Dalton Adding Machine Co. of Poplar Bluff, Mo., is extensively enlarging its plants and hopes to be able to solve the "sales beyond production" problem. Dalton machines are claimed to be constructed almost entirely new lines and can be operated by the touch method. They are simple, fast and practical and are said to embody in their construction the highest-grade steel obtainable. A pamphlet which the company is distributing illustrates and describes them.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Andalusia.—Concerning the report that preliminary survey is made for a railroad from Andalusia, Ala., to Pensacola, Fla., the Manufacturers Record is informed that nothing is doing in the matter at present.

Ala., Haleyville.—An officer of the Illinois Central Railroad says there is nothing in the report that an extension will be built from Haleyville to Birmingham, Ala.

Ark., Blytheville.—The Blytheville, Leachville & Arkansas Southern Railroad Co., says a dispatch, is surveying to complete its line to Marked Tree, Ark., five or six miles. A. C. Lange is general manager at Blytheville, Ark.

Ark., Rogers.—Official information concerning the Kansas City & Memphis Railway Co. is that the line has now 100 miles additional under construction. It succeeds the Arkansas, Oklahoma & Western. W. R. Felker is president and George D. Locke vice-president and general managers both at Rogers, Ark. The W. R. Felker Construction Co. is the contractor.

Fla., Titusville.—The Kissimmee Valley Construction Co., which has contract to build the new line of the Florida East Coast Railway from Maytown to Lake Okechobee and the branch therefrom to Bassenger, has headquarters at Jacksonville, Fla., and W. F. Coehman is reported as president.

Ga., Albany.—An officer says that the Georgia, Southwestern & Gulf Railroad has located through rolling country 60 miles of its proposed line from Albany, Ga., to St. Andrews Bay, Fla., 155 miles. The route is via Newton, Colquitt and Donaldsonville, Ga., and Marianna, Fla. W. M. Legg is president and D. B. Dunn is chief engineer, both at Albany, Ga.

Ga., Brunswick.—Reported that the Glynn Contracting Co. of Brunswick has been given the contract to build the two-mile railway projected by the St. Simons Railway Co. on St. Simons Island, near Brunswick. F. D. Aiken of Brunswick is president.

Ga., Rome.—The Chattanooga Southern Railroad, it is reported, has begun survey between Rome and Rockmart, Ga., for its proposed line to connect with the Seaboard Air Line at the latter point or perhaps to be built from there direct to Atlanta.

Ga., Wrightsville.—The Wrightsville, Adrian & Lyons Railroad, says a dispatch, has finished five miles of grade out of Wrightsville and about 14 miles out of Lyons; also that Northern capitalists, represented by Capt. C. C. Selig, are interested and it will be completed. T. J. James of Adrian, Ga., is president; W. C. Oliver of Lyons, Ga., vice-president; W. F. Staten of Adrian, secretary.

Ky., Covington.—The Louisville & Nashville Railroad, says a press report, has let contract to the Thrasher & Gunter Construction Co. of Knoxville, Tenn., to build double track through 750-foot tunnel between Covington and Latonia, Ky.

La., Homer.—The Shreveport & Memphis Railroad Co. is reported chartered by C. O. Ferguson and A. R. Johnson of Homer, La., and others to build its proposed line connecting Eldorado, Ark., with Homer and Minden, La., and finally Shreveport and Memphis. Construction is reported already begun between the Eldorado & Wesson Railway, with which the new line will connect, and Minden, about 45 miles.

MD., Hagerstown.—An official letter says that the Hagerstown & Clear Springs Railway Co. will build a line between the two points named in its title, 12 miles, via Hargis, Wilson and Spicklers on the Western turnpike. One bridge is required over the Conococheague Creek, 1800 feet. Bids for construction will be opened about February 1. Route is through rolling country. The incorporators are Loren N. Downs of New York, president; James B. Kreps of Hagerstown, Md., vice-president; Hugh L. Kirby of Harpers Ferry, W. Va., secretary and treasurer; Alexander Hagner and Robert H. McCauley of Hagerstown.

Mo., Clinton.—A telegram says that S. O. Norris and others of the Continental Power & Development Co. of Clinton propose to build an electric line between Clinton and Warsaw, Mo., about 30 miles.

N. C., Charlotte.—It is contemplated to build a railroad from Charlotte to Mt. Gilead, Rocky River Springs and Norwood to connect with the Winston-Salem Southbound Railway. The secretary of the Greater Charlotte Club may be able to give information.

N. C., Spray.—Dr. Francis J. DeGiers, 64

Wall street, New York, is reported as saying that the North Carolina & Virginia Railway will be completed by April next from Spray to Ridgeway, Va., and it is contemplated then to immediately start an extension, perhaps 100 miles long. J. D. Huffines of Spray, N. C., and others are the incorporators.

Okla., Shawnee.—The Oklahoma Short Line Electric Railway Co. is reported chartered with \$1,000,000 capital to build a line from Oklahoma City to Joplin, Mo., 175 miles, and from Shawnee, Okla., to Denison, Tex., 125 miles. Estimated cost, \$30,000 per mile. The incorporators are C. C. Wright of Ada, Okla.; M. J. Bentley of Tecumseh, Okla.; Percy Padlock of Oklahoma City; C. V. Sanders of Alameda, Okla.; S. C. Armentrout and Thomas E. Armentrout of Kirkwood, Mo.

S. C., Bowman.—It is expected to extend the Branchville & Bowman Railroad from 15 to 30 miles, but not immediately. It may also be changed from narrow gauge to standard gauge. Samuel Dibble is president at Bowman, S. C.

S. C., Charleston.—The Atlantic Coast Line, it is reported, proposes to build a steel and concrete viaduct at Magnolia Crossing. Estimated cost, \$350,000. E. B. Pleasants is chief engineer at Wilmington, N. C.

S. C., McBee.—A survey has been made for a railroad from McBee southward five miles toward the Ashland and Stokes Bridge region. The names of the promoters are not announced.

Tenn., Nashville.—Citizens of Nashville have, it is reported, raised the required subscription to the proposed Nashville & Gallatin Interurban Electric Railway projected by H. H. Mayberry and others, and it is said engineers will begin survey within a month and actual construction by May next. The line will cost about \$750,000.

Tenn., Newport.—The Tennessee & North Carolina Railroad is reported planning to extend its line from Mt. Sterling to Canton, N. C., about 25 miles. J. B. Hart is president at Clarksville, W. Va.

Tex., Beaumont.—J. H. Elliott, vice-president and general manager of the New Orleans, Texas & Mexico Railroad (Frisco system), is quoted as announcing final arrangements have been closed for the erection of a freight and passenger terminal between Park, Bowie and Fannin Sts. The terminal will occupy about 25 acres, one block wide and seven blocks long. M. C. Byers is chief engineer of the Frisco at St. Louis, Mo.

Tex., Beeville.—President W. A. Frisby of the Nueces Valley Railroad is reported as saying that bids will be requested January 1 to begin clearing right of way January 15, and actual construction will start soon thereafter. The first section is from Beeville to Cotulla, Tex., about 100 miles, on which 25 miles of survey are completed.

Tex., Brownsville.—The Rio Grande Railroad, according to a dispatch, will make extensive repairs to its line, which runs from Brownsville to Point Isabel, Tex., 23 miles. J. Ayala is chief engineer at Brownsville, Tex.

Tex., Brownsville.—The Kilgore Sugar Co. it is reported, will build a branch railroad to connect with its mill northeast of Mercedes. President is James N. Kilgore; vice-presidents, T. L. Conroy and W. H. Kilgore; secretary, A. T. Seale; treasurer, W. H. Lastinger.

Tex., Denton.—A dispatch says that a subscription fund is being raised for a railroad from Denton to Slidell, 20 miles. The Mayor of Denton may be able to give information.

Tex., Fort Worth.—Fred H. Beall, representing the promoters, is reported as saying that a company has been formed in New York to build a railroad from Fort Worth, Tex., to Roswell, N. M., about 400 miles. Survey is being made. His address is The Westbrook, Fort Worth, Tex.

Tex., Longview.—The C. H. Sharpe Contracting Co. of Kansas City is the contractor for the construction of the Fort Bolivar Iron Ore Railway from Longview into Cass county, about 30 miles. Work is to start immediately and be completed in six months. L. P. Featherstone of Galveston, Tex., is president.

Va., Clintwood.—Reported that the Indian Creek narrow-gauge railroad, W. M. Currier, president, may extend its line along Pound River and Brush Creek to Clintwood.

Va., Ridgeway.—The North Carolina-Virginia Railway Co. has been chartered to build six miles of line from Ridgeway, in Henry county, to the North Carolina boundary to connect with the line of the North Carolina-Virginia Railroad Co., recently

chartered in North Carolina to build from Spray to the Virginia boundary. The incorporators are E. C. Wing, president, New York city; E. G. Demarest, secretary and treasurer; P. Minturn Smith and J. W. Davis, all of Brooklyn, N. Y.; S. Strayer of Passaic, N. J., and Malcolm K. Harris of Danville, Va.

W. Va., Morgantown.—An official of the Buckhannon & Northern Railroad Co. says that bids will be opened for construction January 16, the line to run through level country on the west side of the Monongahela River from the Pennsylvania boundary to Rivesville, W. Va., 32 miles. This will include 10,000 yards of masonry bridges; president, J. M. Schoonmaker; vice president, Joseph Wood; secretary and treasurer, J. T. Blair, all at Pittsburg, Pa.; chief engineer, S. D. Brady, Morgantown, W. Va.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Agricultural Machinery.—Lion & Co., P. O. Box 41, Sao Paulo, Rio de Janeiro, Brazil, want to represent American manufacturers of agricultural machinery.

Baling Presses.—See "Ginning Machinery." Bank Fixtures.—Planters' State Bank, Mena, Ark., will purchase bank fixtures, etc.

Bag Machinery.—McKeel-Richardson Hardware Co., Washington, N. C., wants names and addresses of manufacturers of machinery for making fertilizer and grain bags.

Barrel Machinery.—Narrows Milling Co., Narrows, Va., wants prices on machinery to manufacture barrels, slack barrels and nail kegs.

Bathhouse Machinery.—Rammelsberg Baths, Gilbert E. Hozabloom, manager, Hot Springs, Ark., wants data and prices on marble, mechanical ventilation, floor tile, pressed steel doors and window frames, steel lockers, heating systems, plate glass, enamels, bathroom accommodations (nickel and white metal), vacuum cleaning, enamelled furniture, etc.

Boiler.—Sunset Coal Co., E. L. Hendricks, president, 710 W. Broadway, Madisonville, Ky., wants prices on 70-hp boiler.

Boilers.—Fay Machinery Co., 125 Liberty St., New York, wants prices on six 25-horse-power water-tube boilers (Heine preferred); also on four 20 to 25-horse-power water-tube (Babcock and Wilcox preferred) boilers, good for 150 to 160 pounds of steam.

Brick.—Consolidated Realty Co., Huntington, W. Va., wants prices f. o. b. Huntington on red pressed brick; medium grade.

Bridge Construction.—Office of State Highway Commission, Richmond, Va. Bids will be received at Clerk's office, Amelia, Va., until noon January 2 for construction of 35 concrete steel I beam span across West Creek, about four miles from Amelia; to have 12-foot roadway; substructure to include removal of old one; plans and specifications on file at above office and of Clerk of Amelia County, Amelia, Va.; certified check for \$250 to accompany each bid; further information furnished on application to P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

Bridge Construction.—Office of State Highway Commission, Richmond, Va. Bids will be received at Clerk's office of Patrick County, Stuart, Va., for construction of bridge across South Mayo River near Critz, Va.; to be standard 70-foot steel, with 12-foot roadway; wooden flooring and concrete abutments; plans and specifications on file at above office and Clerk of Patrick County, Stuart, Va.; certified check for \$250 to accompany each bid; further information on application to P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

Bridge Construction.—Office of State Highway Commission, Richmond, Va. Bids will be received at Clerk's office in Amelia county, Amelia, Va., for construction of bridge across Flat Creek near Jetersville, Va.; to be 37 feet 3 inches, with 12-foot roadway; steel I beams and concrete abutments; plans and specifications on file at above office and of Clerk of Amelia County, Amelia, Va.; certified check for \$250 to accompany each bid; further information furnished on application

STREET RAILWAYS

Fla., Jacksonville.—The Jacksonville Electric Co., it is reported, has begun construction of an extension from Fort Myers to La Belle and Citrus Center.

La., New Orleans.—A. L. Black has purchased from the parish of St. Bernard the franchise to build a street railway between the Barracks and the plant of the American Sugar Refining Co.

Tex., Cleburne.—The Cleburne Street Railway Co., capital \$35,000, has been chartered to build its proposed line in Cleburne. The incorporators are Daniel Hewitt, J. M. Moore, J. C. Blakeney, L. W. Chase, A. M. Morgan, W. M. Odell, Brown Douglass, J. H. Douglass, E. A. Rice, S. T. Shaw, O. L. Bishop, J. A. Feagin, Perry E. Coon, C. M. Bentley, Lawrence Hewitt.

to office of P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

Broom factory Supplies.—Morristown Broom Co., Morristown, Tenn., wants prices on broom wire, twiners, labels, broom covers, etc.

Building Materials.—Humphreys-Davidson Hardware Co., Wytheville, Va., wants prices on building materials for store building with plate-glass front.

Building Materials.—Andrew J. Bryan, 409 Commerce St., Dallas, Tex., wants catalogues and samples of building materials interesting to architects.

Building Materials.—Elizabeth City Iron Works & Supply Co., J. F. Sanders, president, Elizabeth City, N. C., wants prices on concrete material, structural steel, galvanized steel roofing.

Building Materials.—Wm. L. Welton, 1209 Empire Bldg., Birmingham, Ala., wants samples and catalogues of building materials interesting to architects.

Boilers.—C. F. Hornbeck, Cranford, N. J., wants prices on three 25-horse-power boilers. (Heine preferred.)

Canal Construction.—W. L. McBride, W. E. Peggam and W. T. Brunley, members of committee, Walnut, Miss., invites bids for construction of canal through Muddy Bottom; to be 11½ miles (not 1¼ as recently stated) long, 14 feet wide at top, 10 feet at bottom and 9 feet deep.

Cars.—See "Mining Equipment, etc."

Cars.—Florida Tie & Lumber Co., Limestone, Fla., wants prices on log cars and flats.

Concrete Troughs.—Office Constructing Quartermaster, Fort Sam Houston, Texas. Proposals will be received until 11 A. M. January 19 for construction of three reinforced concrete watering troughs, with water supply pipe lines and tile drains; specifications furnished on application; proposals to be addressed to P. W. Guiney, Constructing Quartermaster.

Cotton Cloth.—Mario M. Covo, Salonica, Turkey, wants white shirting in pieces 30 yards long and one yard wide; now has buyer for 2000 to 3000 pieces; sample on view in office of Manufacturers Record.

Distilling Machinery.—United States Manufacturing Co., Lena, Wis., wants data on denatured alcohol and wood-distilling plants.

Drainage.—Drainage Commissioners of Lyon Swamp Drainage and Levee District, B. F. Keith, chairman, Wilmington, N. C., will receive bids until December 29 for excavating canal about 13 miles, 343,859 cubic yards; constructing dam on Cape Fear River near Kelly's Cove, 35,937 cubic yards fillage, and digging various ditches; specifications on file in office of C. R. Humphreys, civil engineer, and office of Clerk of Superior Court of Pender County, Burgaw, N. C.; certified check, 10 per cent. of bid.

Doors.—W. H. Smith, Victoria, Tex., wants prices on doors.

Electric-light Plant.—City of Nacogdoches, Tex., is receiving bids on electric plant to furnish about 3000 lights. Address J. R. McKinney, secretary City Council.

Electric Fixtures.—W. H. Smith, Victoria, Tex., wants prices on electric fixtures.

Electric-light Plant.—See "Water-works, etc."

Electrical Machinery.—Charles J. F. Steiner Mantel Co., Charles J. F. Steiner, president, 403 Builders' Exchange, Baltimore, Md., wants motors for operating machinery by motor drive. (Office address not given in recent item.)

Electrical Machinery.—Templeton Gin Co., Henry M. Templeton, president, Winchester, Tenn., wants electric motor.

Electrical Machinery.—Empire Manufacturing Co., Goldsboro, N. C., wants prices on complete second-hand lighting outfit; 300 lights, 110 volts; no engine.

Electrical Machinery.—C. F. Hornbeck, Cranford, N. J., wants prices on 50 or 75 kilowatt two-phase 60-cycle 1100-volt direct-connected engine and dynamo; also belted set of same size.

Electrical Machinery.—Sealed proposals will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 25, and then opened, for furnishing machine motors and limit switches to operate the Stoney gate valves and cylindrical valves for controlling the culverts of locks at Gatun, Pedro Miguel and Miraflores; blanks and general information relating to this circular (No. 614) may be obtained at above office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans; 1086 North Point St., San Francisco, Cal.; also from U. S. Engineer Office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill.; and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Borgs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Elevator.—Humphreys-Davidson Hardware Co., Wytheville, Va., wants prices on 7x12-foot elevator.

Engine.—See "Electrical Machinery."

Engines.—See "Gasoline Engines."

Fertilizer Machinery.—R. C. Williams, Dothan, Ala., wants prices on machinery to manufacture fish (including shark) into fertilizer.

Forges.—S. L. Hills, 3628 Shaw Ave., St. Louis, Mo., wants catalogues, information, etc., on air and oil-consumption air-pressure oil-heating rivet forges.

Foundry Equipment, etc.—Elizabeth City Iron Works & Supply Co., J. F. Sanders, president, Elizabeth City, N. C., wants prices on equipment for foundry, machine and smith shops.

Furniture.—See "Bathhouse Materials."

Gasoline Engines.—W. H. Stopple, 1113 Camp St., Dallas, Tex., in market for 4 to 5 horse-power and 6 to 7 horse-power second-hand or factory rebuilt gasoline engines.

Gas Plant.—United States Manufacturing Co., Lena, Wis., will want producer-gas plant and engine.

Gas Plant.—J. D. Manor & Co., New Market, Va., want prices on 60-horse-power producer-gas plant, complete.

Gas-plant Equipment.—Roanoke Gas & Water Co., Roanoke, Va., will want water-gas set and 75,000-foot gas holder during 1911.

Glass.—See "Bathhouse Materials."

Ginning Machinery.—Templeton Gin Co., Henry M. Templeton, president, Winchester, Tenn., wants two 70-foot saw, two stands, press with attachments for unloading and handling seed by wind.

Glass Mirrors.—G. M. Bowie, Weatherford, Tex., wants prices on large quantities of plate-glass mirrors.

Grading.—Bob Farman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. January 9 for grading 15th, 14th, 13th, 12th and 11th Sts., Indiana, Kentucky and Louisiana Aves., etc.; certified check, 3 per cent. of bid.

Grading.—Charles E. Bolling, City Engineer, Richmond, Va., will receive bids until 4 P. M. December 28 for grading alley between Boulevard and Deep Run St. and Leonard and Kensington Sts.; full information furnished upon application at above office; certified check for \$250 to accompany each bid.

Hanger Factory Equipment.—United States Manufacturing Co., Lena, Wis., will be in market for garment-hanger equipment, new or second-hand, as follows: Fuel-oil engine, producer-gas plant and engine, boiler steel tanks, wood and cement tanks, double and

single spindle shapers, sanders, roll sanders, mortising machines, hand saws, light boring machines, rod machines, etc.

Hardware.—Arthur C. Cohen, care of Pan-American Trading Co., New York, wants to represent American manufacturers of hardware, in Brazil, on a commission basis.

Hardware.—Lion & Co., P. O. Box 41, Sao Paulo, Rio de Janeiro, Brazil, want to represent American manufacturers of hardware.

Heating Equipment.—See "Bathhouse Materials."

Heating Plant.—W. J. Matthews, president of School Board, Austin, Tex., will receive bids until January 19 for installation of steam-heating system; separate bids for three distinct systems, namely, hot-blast system, ordinary direct radiation system, and combination of both systems; certified check for \$500, payable to W. J. Matthews; plans and specifications at office of Endress & Walsh, architects, Bosche Bldg., Austin, or may be had on deposit of \$10.

Ice Machinery.—Beaufort Ice Co., C. L. Duncan, president, Beaufort, N. C., wants prices on 10-ton ice plant.

Lathe.—Acker Building & Repair Co., Abbeville, S. C., wants second-hand rebuilt turning lathe.

Machinery Catalogues.—Foote-Roloff Machinery Co., W. G. E. Roloff, president, San Antonio, Tex., wants catalogues from manufacturers of machinery.

Machinery.—Arthur C. Cohen & Co., care of Pan-American Trading Co., New York, wants to represent American manufacturers of machinery, in Brazil, on a commission basis.

Mantels.—W. H. Smith, Victoria, Tex., wants prices on mantels.

Marble.—See "Bathhouse Materials."

Mining Equipment, etc.—East Tennessee Coal Co., E. J. Davis, president, Knoxville, Tenn., wants prices on mine cars, shaker screens, etc.

Mirrors.—See "Glass."

Paving.—Z. Fearing, Mayor; D. M. Jones and N. R. Parker (committee), Elizabeth City, N. C., will receive bids until noon January 2 for paving streets with either asphalt, brick or Belgian block.

Paper.—Mario M. Covo, Salonica, Turkey, wants bill or placard paper, 56x74 inches, weighing 22 grammes to square meter (40 inches); now has buyer for 100,000 pounds or over of various colors; sample on view in office of Manufacturers Record.

Paving.—City Council, Temple, Tex., will receive bids until 8 P. M. December 27 for construction of 625 square yards of pavement on N. Main St. and W. French Ave.; bids to be made on blanks furnished by city, to be addressed to Mayor and City Council, accompanied by certified check for \$500, and based on use of either of following materials: (1) brick on concrete, (2) wood block on concrete, (3) bitulith on concrete, (4) rock asphalt on concrete, (5) Hasam concrete; plans and specifications for each of above kinds of pavement on file in office of City Engineer; M. O. Woodward, City Secretary.

Pianos.—W. E. & F. D. Gore, Orlando, Fla., want names and addresses of manufacturers of "stencil" pianos.

Piping.—J. C. Steele, Statesville, N. C., wants prices (delivered) on 2500 feet of 4-inch water main, 2500 feet of 6-inch and 1000 feet of 4-inch sewer mains.

Printing Machinery.—See "Stamping Presses."

Printing Machinery.—Samuel B. Coffin Company, G. H. Kerns, president, 539 Hamilton St., High Point, N. C., wants machinery for printing American qtd. imitation; second-hand considered.

Pumps.—Arthur C. Cohen, care of Pan-American Trading Co., New York, wants to represent American manufacturers of pumps, in Brazil, on a commission basis.

Rails.—Florida Tie & Lumber Co., Limestone, Fla., wants prices (delivered) on second-hand 25 or 30-pound rail for five miles of road.

Rails.—Fay Machinery Co., 125 Liberty St., New York, wants prices on 150 tons of 30-pound standard relaying rails with splices and 300 tons of 25-pound relaying rails.

Road Work.—Charles E. Bolling, City Engineer, Richmond, Va., will receive bids until 4 P. M. December 28 for grading and graveling certain streets and for construction of sewer; information furnished on application to Mr. Bolling; certified check, \$250.

Road Macadamizing.—Proposals endorsed "Proposals for Macadamizing" will be received at Norfolk County Clerk's office, Portsmouth, Va., until 12 M. January 2 for

macadamizing about three miles of road from Tanner's Creek Cross Roads to Ocean View; plans and specifications prepared by Virginia State Highway Commissioner can be seen at Clerk's office or office of State Highway Commissioner, Richmond, Va.; other details on application to Wm. G. Brown, engineer in charge, 606 Linden Ave., Portsmouth, Va.; Alvah H. Martin, chairman Permanent Road Improvement Commission of Norfolk County, Virginia; P. St. J. Wilson, Virginia State Highway Commissioner, Richmond, Va.

Sanitary Goods.—Lion & Co., P. O. Box 44, Sao Paulo, Rio de Janeiro, Brazil, want to represent American manufacturers of sanitary goods.

Saws.—Acker Building & Repair Co., Abbeville, S. C., wants second-hand rebuilt hand saw and swing cut-off saw.

Screens.—See "Mining Equipment, etc." Sewer Construction.—See "Road Work."

Sewer Construction.—C. A. Price, chairman Sewerage Commissioners, Binghamton, Tenn. (American Car & Foundry Co.), will receive bids until January 3 for construction of about 5500 feet of sanitary sewers, 6 to 10 inches in diameter; plans and specifications may be seen at office of J. A. Omberg, Jr., 1906 Exchange Bldg., Memphis, Tenn.; certified check, \$250.

Sewing Machines.—W. E. & F. D. Gore, Orlando, Fla., want names and addresses of manufacturers of sewing machines.

Steam Shovel, etc.—Fay Machinery Co., 126 Liberty St., New York, wants prices on 12-yard and 14-yard steam shovels; Marion preferred.

Steel Rods, etc.—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. January 5 for furnishing mechanical bond steel rods, turned bolts, rubber valves, cardboard and paper. Blanks and general information relating to Circular No. 615 may be obtained from above office or offices of assistant purchasing agents, 24 State street, New York city; 55 National Realty Building, New Orleans, La., and 1085 North Point street, San Francisco, Cal.; also

from the United States Engineer offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, O.; Cincinnati, O.; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Steel Doors, etc.—See "Bathhouse Materials."

Steel Parts, etc.—East Tennessee Coal Co., E. J. Davis, president, Knoxville, Tenn., wants names and addresses of manufacturers of steel castings; also pressed steel parts, particularly mine-car bumpers.

Store Fixtures.—Edward Schlaefke, Electra, Tex., wants names and addresses of manufacturers of fixtures for hardware store.

Suction Equipment.—See "Ginning Machinery."

Stamping Presses.—McKeel-Richardson Hardware Co., Washington, N. C., wants names and addresses of manufacturers of stamping press for bags.

Tanks.—United States Manufacturing Co., Lena, Wis., will want boiler steel, wood or cement tanks.

Traction Engine.—Florida Tie & Lumber Co., Limestone, Fla., wants to lease or buy standard-gauge traction engine.

Vacuum Cleaning Apparatus.—See "Bathhouse Materials."

Ventilating Apparatus.—See "Bathhouse Materials."

Water-works, etc.—City of Manchester, Tenn., E. P. Vaughn, Mayor, wants engineers to estimate cost of water-works and electric-light plant.

Woodworking Machinery.—United States Manufacturing Co., Lena, Wis., will need double and single spindle shapers, sanders, roll sanders, mortising machines, band saws, light boring machines, rod machines, etc.

year, but 1910 has gone far above all previous records, despite reports that railroads have materially curtailed their buying.

Increasing Its Facilities.

The addition to the boiler shops of the J. I. Case Threshing Machine Co., Inc., Racine, Wis., is nearly completed. This building is 60x215 feet, and will be used exclusively for a stockroom for the Case boiler shops. A boiler storage, 230x60 feet, is equipped with a traveling crane for movement of boilers from one part of the building to another. The Garfield warehouse, which is 100x250 feet, two stories high, is also being remodeled. This building will be used as a machine shop. As soon as the weather will permit other buildings will be erected, the expanding trade of the company making this necessary.

"Detroit-Fenestra" Windows in Railroad Shops.

Recent developments in modern industrial construction are particularly apparent in some of the newer railroad shops finished and in process throughout the country. The new shops of the New York Central at West Albany, and of the Chicago & Northwestern of Chicago show an immense expanse of windows of the "Detroit-Fenestra" type, made in solid metal bars of rolled steel. In practice this more substantial filling of window openings is shown to be successful and economical. "Detroit-Fenestra" windows are manufactured by the Detroit Steel Products Co., Detroit, Mich.

An Immense Electric Sign.

An immense electric sign of rust-resisting metal, which has recently been erected on a large smokestack in Alliance, O., for the Morgan Engineering Co., is said to be the largest in the country. The sign spells "Morgan," the letters being hung perpendicularly down the side of a 400-foot smokestack. Each of the six letters is 8 feet high and from 8 to 10 inches deep, while the outline of each is 1 foot wide. Hung on the side of the stack the letters cover a distance of 88 feet. There is a total of 310 electric bulbs in the sign, each being of 8 candle-power, or a total of 2480 candle-power. In the construction of this sign Toncan metal was used, because it was necessary to find a metal to withstand adverse atmospheric conditions and resist rust and corrosion. The smokestack upon which the letters were suspended is in the center of the Alliance manufacturing district, and the metal is continually exposed to smoke, dirt, rain and other elements. Toncan metal is manufactured by the Stark Rolling Mill Co. of Canton, O.

Lubricating Companies Combine.

The Slight Feed Oil Co. of Milwaukee and the Phenix Lubricator Co. of Chicago have combined as the Richardson-Phenix Company of Milwaukee. This company has completed its new factory at Milwaukee, which it claims to be one of the largest plants in the country devoted exclusively to the manufacture of lubricating devices. It will manufacture the Richardson and Phenix mechanical lubricators, individual oiling systems, power-plant oil filters, and general appliances for lubricating cylinders and machinery. Wilbur E. Richardson, president of the new company, has devoted a number of years to the development of lubricating specialties, and he is in personal charge of the works, giving attention to the designing and developing of new apparatus for efficient lubrication. J. William Peterson, president of the Peterson Engineering Co., has been appointed general sales manager of the Richardson-Phenix Company, with headquarters in the Hudson Terminal Bldg., New York. The Western sales office is in the First National Bank Bldg., Chicago, under the management of J. S. Ward.

Tests of Albany Grease.

Tests of various lubricants and grease compounds, made with the testing machines in the laboratory of the Albany Lubricating Co., better known as Adam Cook's Sons, 313 West St., New York, give an interesting insight into the efficiency of the standard Albany grease. This friction testing machine gives the coefficient of friction not only when the lubricant is first applied, but continuously until the particular sample is "worn out." The tests show that Albany grease maintained a very low coefficient of friction throughout a test of several hours' continuous wear. The results of friction tests of lubricants by reliable firms should have considerable weight with engineers who want to get the best results for the expense entailed. A grease compound that will show a low coefficient of friction when tested to the limit on a machine made for the purpose should also give a relatively good result in

actual use on the bearings of an engine; and, conversely, a grease that shows a high coefficient of friction on the testing machine would give even worse results under the more trying test of actual use.

Recent Sales of Vilter Machines.

Recent sales of ice-making and refrigerating machinery by the Vilter Manufacturing Co., 832 Clinton St., Milwaukee, include the following: 15x30-inch direct-connected Corliss engine to Horlick's Malted Milk Co., Racine; 300-ton refrigerating machine with 24 and 48x36-inch cross-compound Corliss engine to Obermayer & Liebman, Brooklyn; 40-ton refrigerating machine and 14x30-inch girder-bed Corliss engine to Chapin-Sacks Manufacturing Co., Washington; 120-ton refrigerating plant and 20 and 24x26-inch cross-compound Corliss engine to Fairmont Creamery Co., Omaha; 80-ton double-acting refrigerating machine and 18x36-inch heavy-duty Corliss engine to James R. Hensler Ale Brewing Co., Newark; brine cooler, tank, etc., to Anheuser-Busch Brewing Association, St. Louis; ammonia regenerator to Citizens' Ice Co., San Antonio; 20-ton refrigerating machine and 28 and 48x34-inch cross-compound Corliss engine to Atlantic Ice & Coal Corporation, Atlanta; 300-ton brine tank to Gate City Ice & Precooling Co., San Bernardino; 12 coils atmospheric ammonia condenser to Pittsburg Brewing Co., Pittsburg, and others.

Wright Safety Air Brake.

An additional element of safety to the already universally-used air brake on railroad trains has been developed by the Wright Automatic Safety Air Brake Co. of Greensboro, N. C. This automatic safety appliance is a simple attachment weighing three pounds, secured to each truck of a car. It consists of a valve which when opened by any abnormal position of the truck, such as a derailment of one wheel, or other similar accident, instantly allows the air to escape from the pressure pipe line and sets the brakes throughout the train. The device has been perfected after seven years of improvements and actual tests. It is at present used on several trains, and it is said to have demonstrated its merits on one occasion, when a serious wreck was averted by this appliance automatically throwing on the brakes, causing the train to stop within 50 feet after one truck had left the rails. The company is prepared to send a representative with full-size model of the appliance to consult with any prospective purchaser, or will give actual demonstrations on a car. J. E. Latham is president of the company and John B. Wright is general manager.

Large Navy Pumping Contract.

A large contract for pumping machinery has been awarded to the Alberger Pump Co. of New York by the Bureau of Yards and Locks, Navy Department, the amount involved being over \$225,000. This contract covers pumping equipment for the three dry-docks to be constructed at the New York Navy-Yard, the Puget Sound Navy-Yard at Bremerton, and the Pearl Harbor Naval Station, near Honolulu. It calls for eleven 54-inch vertical volute pumps and seven 15-inch vertical volute drainage pumps, together with the necessary induction motors and all accessories, piping, electrically operated gate valves and controlling apparatus for the motors. Three of the 54-inch units will be located at New York, while four are required for each of the other docks. Each unit will be required to operate against a static head up to 44 feet and to maintain an average capacity of 65,000 gallons per minute when emptying the dock. In addition to obtaining a high pumping efficiency, all the characteristics of the pump have to be very carefully determined in order to meet the special conditions imposed in this class of work, and the Alberger Pump Co. is well equipped with the necessary engineering data and experience to undertake work of this high character.

Frick Company's Sales.

Great activity in the demand for ice and refrigerating machinery is indicated in the many sales which the Frick Company of Waynesboro, Pa., has recently made. These sales have been made in all parts of this and foreign countries, several of them being on duplicate orders. Southern sales include the following: 16-ton improved flooded freezing system and extension to freezing tank to Maysville (Ky.) Ice Co.; changing freezing system to improved flooded freezing system for Eckert Meat Co., Henderson, Ky.; brine piping for ice storage to F. W. Martz, Boonsboro, Md.; 30-ton ice-making plant with improved flooded freezing system and distilling system to Thomasville (Ga.) Ice & Manufacturing Co.; ammonia compressors and

INDUSTRIAL NEWS OF INTEREST

New Manager of Birmingham Office.

The Niles-Bement-Pond Company and the Pratt & Whitney Company, main offices, 111 Broadway, New York, announce that W. R. Lathrop has been appointed manager of their sales office at 1297-1298 Brown-Marx Bldg., Birmingham, Ala., in place of N. C. Walpole, who has resigned.

Messrs. Webb and Kennedy Secured.

The engineering firm of Dodge, Day & Zimmermann, Philadelphia, have added to their organization Walter Loring Webb and James M. Kennedy, both well known in the engineering world. Mr. Webb is the author of several engineering textbooks, including "The American Civil Engineers' Pocket-Book," "Economies of Railroad Construction" and "Problems in the Use and Adjustment of Engineering Instruments."

Wants Location for Sheet Metal Trade.

An advantageous location for a sheet-metal and roofing trade is desired, and correspondence relative to a proposition of this character is invited, with a statement as to the population of the city and the number of people handling the same trade. For particulars address No. 730, care Manufacturers Record.

Transfers General Offices.

In order to facilitate its business transactions and to avoid delays in correspondence, the Universal Road Machinery Co. has transferred its general offices from 120 Liberty St., New York, to Kingston, N. Y., where its factory is located. The company announces that the office of President George H. Ford will be maintained at 120 Liberty St., New York.

Long Leaf Pine for Sale.

Parties who desire to invest in long leaf pine timber in Texas are invited to communicate with R. G. McPhail of Graham, Tex. Mr. McPhail states that he has 50,000 acres of pine timber of an excellent quality and will guarantee 18,000 feet per acre, the trees being of sufficient length to make from three to five cuts. He will sell only the timber.

Wm. L. Welton, Architect.

Wm. L. Welton, architect, announces he is now located in his new offices at 1209-1211 Empire Bldg., Birmingham, Ala. He invites manufacturers to send catalogues and samples of building materials that interest architects.

Enterprise Mill & Lumber Co.

The Enterprise Mill & Lumber Co. of Baltimore will build a modern manufacturing plant to replace its factory that was burned last week at a loss of \$20,000. Pending the completion of this plant, the company will establish a temporary factory. Temporary offices have been secured at 318 Law Bldg.

Knitting Mill for Sale.

Authorized by the court to sell at private sale, the trustees of the Williamsburg Knitting Mill Co., Williamsburg, Va., offer the entire plant and equipment. This mill is equipped with modern machinery for the manufacture of men's fleece-lined underwear and has a capacity of 30 dozen per day. It is stated that labor conditions are good and freight rates favorable.

Manager of Southern District.

Charles T. Fairbairn has been appointed manager of the Southern district of the Republic Iron & Steel Co., general offices, Oliver Bldg., Pittsburgh. Mr. Fairbairn succeeds W. A. Green, who resigned to accept service with another company, and will maintain his office at Birmingham, Ala. All officials of the Republic Company in the Southern district will report to Mr. Fairbairn, whose appointment becomes effective January 1, 1911.

Farm, Stock and Truck Lands.

An opportunity for the purchase of farm, stock and truck lands near Fort Worth, Tex., is presented in announcements of J. N. Winters & Co. of Fort Worth, Tex. This city has a population of about 75,000, is rapidly growing, and presents an excellent market for live stock and farm products. Large packing plants of the Swift and Armour companies are located there, and other advantages are presented. Write for map and complete description of the properties offered.

Completing New Plant.

The American Valve & Meter Co., Cincinnati, O., states that its new building is rapidly approaching completion and the company expects to occupy it shortly. This building is a reinforced-concrete structure, 50x200 feet, three stories high. The old location having proven inadequate to the growing trade of the company, it was determined to make this move, and work on the building has been proceeding for some months. Up to 1909 the company's trade had been very good. That was supposed to be the banner

12-ton improved flooded freezing system to Sealy (Tex.) Cotton Co.; 6-ton refrigerating compression side to be installed for Gregor Fleck & Son, Nokomis, Ill., and 2-ton refrigerating compression side to be installed for L. B. Radecker, Cedar Hill, Mo., to John Hague, engineer, St. Louis; direct expansion piping to Charlottesville (Va.) Ice Co.; 15-ton refrigerating plant and direct expansion piping to A. D. Davis, Mobile, Ala.; 8-ton ice-making machine for Brazos Hotel, Houston, Tex.; 12-ton ice-making plant with improved flooded freezing and distilling systems to Beaven-Jackson Lumber & Veneer Co., Evergreen, Ala.; 18-ton refrigerating compression side, 2-ton freezing system, triple pipe brine-cooling system and direct expansion piping to L. M. Greenawald, Hagerstown, Md.

Sibley-Menge Brick & Coal Co.

The Sibley-Menge Press Brick Co. and the Sibley Bros. Coal Co., near Birmingham, have combined as the Sibley-Menge Brick & Coal Co. Capital stock has been increased by \$100,000 for constructing a common-brick plant adjoining the press-brick plant at Sibleyville, Ala., to have an annual capacity of 12,000,000 bricks, and for the extension of mining operations at the Langley mines. The Sibley-Menge press bricks are endorsed by the leading architects and contractors, and the demand for them has increased until it has been necessary to double the capacity of the plant since the company was organized four years ago. The Sibley Black Creek coal, accepted as one of the highest grades of steam coal in the South, will continue to be mined at the Langley mines. The American Net & Twine Co. of Anniston, in a letter to the Sibley-Menge Company, referring to an analysis of this coal by Baltimore chemists, says: "Our connections in the East express themselves as failing to get any coal which has as good an analysis as this." The Sibley-Menge people have been identified with the coal and clay-working industries of the Birmingham district for many years, and the generous patronage given their products is an example of how the practice of "patronizing home industries" is affecting the broad scope of Southern industrial development. The company's offices are at 842 Brown-Marx Bldg., Birmingham.

Test of Babcock & Wilcox Boilers.

A Babcock & Wilcox boiler, representing the type proposed for installation on the battleships Wyoming and Arkansas, has been tested by a board of naval officers for economical efficiency. The contract required the test of one boiler before installation. The test boiler was similar in all respects to those intended for the vessels, except that the test boiler was one-half size of the others. The contract called for a test of 24 hours each for four tests at successive rates of combustion of 15, 25, 35, and not less than 40 pounds of coal per square foot of grate surface per hour, allowing two hours to clean fires between tests. The equivalent evaporation from and at 212 degrees Fahrenheit at the highest rate of combustion of not less than 40 pounds per square foot of grate surface per hour was required to be not less than 11 pounds of water into dry steam per pound of combustible. These contract requirements were intended to represent actual service conditions as nearly as possible. Among other results these tests clearly showed the advantage attending the use of gas analyses by apparatus on board as an aid to efficient firing. When each sample was analyzed the result was marked up plainly, so that any faulty condition as to air supply, clinker on grates, thick fires or holes in fires was thus indicated and corrected at once and the crew impressed with the practical possibilities of careful and scientific firing. The coal was hand picked Pocahontas of excellent quality, burned freely, with little clinker. The evaporative results obtained were excellent and indicate the high efficiency possible with the ordinary run of firemen if properly supervised and directed. The Board reported that the sample boiler tested fully met all requirements as to evaporative efficiency, and recommended the approval of this type of boiler for general use in the naval service.

TRADE LITERATURE.

To Keep a Grip on Time.

Possessors of the calendar issued by the American Linseed Co. of New York will have no difficulty in 1911 in finding time every day. The calendar has a sheet for each day in the year bearing the date in figures nearly a foot high. They cannot be missed.

An Attractive Christmas Card.

For the purpose of extending Christmas greetings to its friends and customers, the Keuffel & Esser Company, general offices and

plant, Hoboken, N. J., recently mailed an attractive Christmas card. Attached to this was a celluloid card containing a calendar for 1911 and on the reverse side was an interesting view of the company's plant. The Keuffel & Esser Company manufactures mathematical and surveying instruments, drawing materials, measuring tapes, etc., and maintains branch offices in New York, Chicago, St. Louis, San Francisco and Montreal.

Marion Steam Shovels.

During the quarter of a century just closed many important mechanical achievements have marked the manufacture of Marion steam shovels. In simplicity of design, maximum strength and efficiency, minimum cost of operation and high grade of workmanship it is claimed that these shovels have won the confidence and endorsement of engineers throughout the world. They are constructed especially to do the maximum lifting service for the fuel consumed, and are said to perform their duties with the minimum outlay for maintenance charges. Marion steam shovels are manufactured by the Marion Steam Shovel Co., Marion, O., and are interestingly illustrated and comprehensively described in an attractive catalogue (No. 50) which the company is distributing.

Heating and Vacuum Cleaning.

The products of the McCrum-Howell Company, general offices, 103 Park Ave., New York, which manufactures the well-known Richmond heating systems and all forms of vacuum cleaning equipment, are illustrated in the catalogues of that company. Catalogues covering small, medium and heavy service types of vacuum cleaners have been issued by the Richmond Sales Co., 103 Park Ave., New York, which handles products of the McCrum-Howell Company. The uses and results depicted by illustrations and explanations of these cleaning machines indicate some of the possibilities of vacuum and suction cleaners. This method of cleaning ordinary living quarters, residences and hotels, as well as large office buildings, is not extensively employed, but the practice gives promise of great development.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., December 28.

There was little business done in the Baltimore stock market during the past week, the dullness consequent upon the Christmas holidays being conspicuous. In the trading United Railways common sold at 157½ to 161¼; do, trust certificates from 157½ to 161¼; do, income bonds from 61½ to 61¾; do, funding 5s, 85 to 84¾; do, do, scrip, 84¾ to 85; United 4s, 84¾; Consolidated Gas, Electric Light & Power common, 64½; do, 4½s, 84½ to 84½; Consolidated Gas 5s, 108½; Seaboard Air Line common, 109; Seaboard Company second preferred, 42½; Seaboard 4s, stamped, 85; do, three-year 5s, 100; do, 10-year 5s, 100; Consolidated Cotton Duck preferred, 20; Mt. Vernon-Woodberry Cotton Duck 5s, 74.

Bank stock sold as follows: Bank of Commerce, 30½; Union, 129; Maryland, 25½; Mechanics', 28¾ to 28¾; Merchants', 180; Farmers and Merchants', 49. Mercantile Trust sold at 148½ to 150; United States Fidelity, 146.

Other securities were traded in thus: Consolidation Coal, 102 to 103; do, rights, ¼; Fairmont Coal 1st 5s, 96¾; Houston Oil common, 7½; do, preferred, 47½; Atlantic Coast Line of Connecticut stock, 22½; do, do, 5-20s, 90; Atlantic Coast Line Consolidated 4s, 94½; Baltimore City Passenger 5s, 100; Baltimore City 4s, 105½; do, 100 to 100½; do, 3½s, 108, 88; Coal & Iron Railway 5s, 101½ to 102; Norfolk & Portsmouth Traction 5s, 82 to 82½; Seaboard & Roanoke 5s, 106; Western North Carolina 6s, 105½; Maryland Electric 5s, 96¾ to 97; Norfolk Railway & Light 5s, 97½; Virginia Midland General Mortgage 5s, 107; Northern Central Railway stock, 127 to 125; Jamison Coal & Coke, George's Creek 5s, 89 to 89½; Virginia Midland 2d, 100½; do, 3d, 100¾; do, 5th, 106; Georgia & Alabama Consolidated 5s, 105; Somerset Coal 5s, 109½; Jamison Coal & Coke, George's Creek scrip, 90; Washington & Vandemere 4½s, 93½.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended December 28, 1910.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	114	
Atlantic Coast of Conn.....	100	222	230
Charleston Consolidated.....	50	32	
Fairmont & Clarks Trac.....	100	75	80
Georgia Sou. & Fla.....	100		40
Georgia Sou. & Fla. 2d Pfd.....	100		73
Seaboard Co. Common.....	100	19	
Seaboard Co. 1st Pfd.....	100	78	
Seaboard Co. 2d Pfd.....	100	42	43
United Rys. & Elec. Co.....	50	16	16½

Bank Stocks.	Par.	Bid.	Asked.
Citizens'.....	10	40	
Drovers & Mechanics.....	100	215	
Farmers & Merchants.....	40	49	50
First National.....	100	135	140
Mechanics.....	100	24	
Merchants.....	100	180	
Howard.....	10	13½	
Marine.....	30	41	
Mechanics.....	10	28½	29½
Union.....	100	128½	130
Western.....	20	36	36½
National City.....	100		120

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding.....	25	79½	81
Maryland Trust Pfd.....	100	102	107
Maryland Casualty.....	25	15	
Mercantile Trust & Deposit.....	50	149	150
Union Trust.....	50	39	
U. S. Fidelity & Guaranty.....	100		147½

Miscellaneous Stocks.	Par.	Bid.	Asked.
Baltimore Brick.....	100	1½	
Con. Cotton Duck Pfd.....	50		21
Con. Gas, Elec. Lt. & P. Com.....	100	64½	65
Con. Gas, Elec. Lt. & P. Pfd.....	100	89	90
Consolidation Coal.....	100	101½	103½
Mer. & Miners' Trans. Co.....	100	79	82

Railroad Bonds.	Par.	Bid.	Asked.
Atlantic Coast 1st 4s.....	94½	94½	
Atlantic Coast Conv. Deben. 4s.....	96	96½	
At. Coast (Conn.) 4s, Cts. 5-20s.....	90		
Atlantic Coast (Conn.) 5s, Cts. 5-20s.....	103		
Balto. & Harpersburg 5s.....	106½		
Balto. & Harpersburg Ext. 5s.....	104		
Coal & Coke Railway 5s.....	91		
Coal & Iron Railway 5s.....	102		
Col. & Green 1st 6s.....	105½		
Georgia & Alabama 5s.....	104½	105	
Georgia, Car. & North. 1st 5s.....	105		
Georgia Pacific 1st 6s.....	113		
Georgia Southern & Florida 1st 5s.....	106	108½	
Macon, Dublin & Savannah 5s.....	93		
Maryland & Pennsylvania 4s.....	86	91	
Potomac & Annapolis 1st 5s.....	109½		
Potomac & Annapolis 1st 5s.....	92½		
Potomac Valley 1st 5s.....	108	109½	
Raleigh & Augusta 1st 6s.....	115		
Richmond & Danville Deben. 5s.....	105		
Savannah, Fla. & West. 5s.....	119	111	
Savannah, Fla. & West. 6s.....	124		
Seaboard 4s, Stamped.....	84½	85	
Seaboard Adjustment 5s.....	76½	77	
Seaboard 10-year 5s.....	100	100½	
Seaboard 5-year 5s.....	100	100½	
Seaboard & Roanoke 5s.....	105	106½	
Seaboard & Roanoke 6s.....	100		
Southern Railway Co. 5s.....	107		
Virginia Midland 2d 6s.....	100½		
Virginia Midland 3d 6s.....	103		
Virginia Midland 4th 5s.....	104		
Virginia Midland 5th 5s.....	105		
Virginia Midland G. M. 5s.....	107	107½	
Washington Terminal 3½s.....	88	88½	
Washington & Vandemere 4½s.....	83½	97	
Western Maryland 4s.....	86½	86½	
Western N. C. Con. 6s.....	105½		
West Virginia Central 1st 6s.....	100½		
Wilmingon & Weldon 5s.....	109		

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s.....	100	100½	
Anacostia & Potomac 5s, Gtd.....	102	102½	
Atlanta Con. Street Railway 5s.....	105		
Balto. City Pass. 5s.....	100	100½	
Balto. City Pass. 4½s.....	99½	99½	
Balto. Sp. Pt. & C. 4½s.....	94	95	
Balto. Traction (N. B.) 5s.....	109½	110½	
Central Railway (Balto.) Con 5s.....	106	110	
Charleston City Railway 5s.....	105		
Charleston City Electric 5s.....	94	95½	
City & Suburban 5s (Balto.).....	105	105½	
City & Suburban 5s (Wash.).....	102½		
Fairmont & Clarksburg Trac. 5s.....	96	96½	
Knoxville Traction 5s.....	102		
Macon Railway & Light 5s.....	95		
Maryland Electric Railway 5s.....	96½	97	
Memphis Street Railway 5s.....	96½	98	
Norfolk & Portsmouth Trac. 5s.....	82½	82½	
Norfolk Railway & Light 5s.....	97	97½	
Norfolk Street Railway 5s.....	103½		
United Railways 1st 4s.....	84½		
United Railways Inc. 4s.....	61¾	62	
United Railways Funding 5s.....	84½	85	

Miscellaneous Bonds.	Par.	Bid.	Asked.
Ata. Con. Coal & Iron 5s.....	77	85	
Atlanta Gas 1st 5s.....	102		
Baltimore Brick 5s.....	78½		
Baltimore Electric 5s, Stp.....	87½	88	
Consolidated Gas 5s.....	108	108½	
Consolidated Gas 4½s.....	93½		
Con. Gas, Elec. Lt. & P. 4½s.....	84½	85	
Consolidation Coal of Ky. 5s.....	103½		
Consolidation Coal Refdg. 4½s.....	91½		
Fairmont Coal 1st 5s.....	96½	97	
G. B. S. Brewing 1st 4s.....	43	43½	
Maryland Steel Co. 5s.....	101		
Mt. Vernon-Woodby Cot. Duck 5s.....	73½	74½	
United Elec. Lt. & P. 4½s.....	92	92½	

SOUTHERN COTTON-MILL STOCKS.

Quotations furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending December 26.

	Par.	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	75		
Alken Mfg. Co. (S. C.).....	90		
American Spinning Co. (S. C.).....	160		
Anderson Cotton Mills (S. C.).....	48		
Anderson Cot. Mills (S. C.) Pfd.....	100		
Arcadia Mills (S. C.).....	100		
Arkwright Cotton Mills (S. C.).....	90	103	
Augusta Factory (Ga.).....	60	65	
Avondale Mills (Ala.).....	116		
Belton Mills (S. C.).....	140		
Brandon Mills (S. C.).....	90	103	
Brozon Mills (S. C.).....	90		
Cannon Mfg. Co. (N. C.).....	135		
Chabarrs Cotton Mills (N. C.).....	130	135	
Chadwick Mfg. Co. (N. C.) Pfd.....	100		
Chickamauga Mfg. Co. (S. C.).....	180		
Clifton Mfg. Co. (S. C.).....	102		
Clinton Cotton Mills (S. C.).....	120		

Columbus Mfg. Co. (Ga.).....	90	98
Courtney Mfg. Co. (S. C.).....	100	
Dallas Mfg. Co. (Ala.).....	90	
Darlington Mfg. Co. (S. C.).....	80	
D. E. Converse Co. (S. C.).....	100	
Drayton Mills (S. C.).....	95	106
Engle & Phenix Mills (Ga.).....	117	
Enley Cotton Mills (S. C.).....	60	
Enoree Mfg. Co. (S. C.).....	96	100
Enoree Mfg. Co. (S. C.) Pfd.....	96	100
Enterprise Mfg. Co. (Ga.).....	80	85
Exposition Cotton Mills (Ga.).....	200	
Gaffney Mfg. Co. (S. C.).....	75	78
Gainesville Cotton Mills (Ga.).....	75	80
Glenwood Cotton Mills (S. C.).....	150	
Gluck Mills (S. C.).....	102	106
Granby Cot. Mills (S. C.) 1st Pfd.....	35	45
Granville Mfg. Co. (S. C.).....	155	165
Greenwood Cotton Mills (S. C.).....	57	60
Grendel Mills (S. C.).....	103	108
Hartsville Cotton Mill (S. C.).....	100	
Hemietta Mills (N. C.).....	160	175
Inman Mills (S. C.).....	104	108
King Mfg. Co. J. P. (Ga.).....	90	93
Lancaster Cotton Mills (S. C.).....	130	
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Lanely Mills (S. C.).....	120	127
Lanely Mills (S. C.) Pfd.....	127	
Laurens Mills (S. C.).....	171	178
Limestone Mills (S. C.).....	155	160
Lockhart Mills (S. C.).....	68	
Lockhart Mills (S. C.) Pfd.....	99	106
Loray Cotton Mills (N. C.) Pfd.....	95	97½
Marlboro Cotton Mills (S. C.).....	75	80
Mills Mfg. Co. (S. C.).....	102	
Molloy Mfg. Co. (S. C.).....	106	110
Monaghan Mills (S. C.).....	104	109
Monaghan Cotton Mills (S. C.).....	110	
Newberry Cotton Mills (S. C.).....	140	150
Ninety-Six Cotton Mills (S. C.).....	140	150
Norris Cotton Mills (S. C.).....	121	130
Olympia Cotton Mills (S. C.).....	90	
Orr Cotton Mills (S. C.).....	105	
Pacelot Mfg. Co. (S. C.).....	95	
Pacelot Mfg. Co. (S. C.) Pfd.....	99	102
Pelzer Mfg. Co. (S. C.).....	189	
Piedmont Mfg. Co. (S. C.).....	175	177
Poe Mfg. Co. F. W. (S. C.).....	110	125
Saxon Mills (S. C.).....	130	
Sibley Mfg. Co. (Ga.).....	75	78
Spartan Mills (S. C.).....	129	132
Triton Mfg. Co. (Ga.).....	130	
Teapaw Mills (S. C.).....	310	350
Union-Buffalo (S. C.) 1st Pfd.....	74	78
Union-Buffalo (S. C.) 2d Pfd.....	26	
Victor Mfg. Co. (S. C.).....	115	120
Warren Mfg. Co. (S. C.).....	107	
Warren Mfg. Co. (S. C.) Pfd.....	106	110
Washington Mills (Va.).....	28	
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	130	
Wicacasset Mills (N. C.).....	135	
Woodruff Cotton Mills (S. C.).....	118	122
Woodside Cotton Mills (S. C.).....	102	105
Watts Mills (S. C.).....	90	95
Williamson Mills (S. C.).....	120	125

Banks in Mississippi.

Statements showing the condition of 332 State and 30 national banks of Mississippi at the close of business November 16, 1910, have been issued in pamphlet form, the data being compiled by E. J. Smith, auditor of public accounts. A condensed statement covering results for all the banks shows: Loans and discounts, \$59,689,467; due from other banks, \$16,955,458; cash on hand, \$4,665,453; capital paid in, \$16,024,786; surplus, \$3,966,521; undivided profits, \$3,046,054; individual deposits, \$54,696,086; time certificates of deposit, \$11,533,895; due other banks, \$1,666,981; total resources, \$102,298,320.

FINANCIAL CORPORATIONS.

Ala., Oxford.—The Oxford National Bank has been approved; capital, \$25,000. Frank Leigh will be cashier. W. H. McKleroy, president of the Anniston National Bank, and others are interested.

Ark., Rogers.—Official: The State Trust Co., capital \$100,000, with \$50,000 paid up, will begin business about January 9 with J. F. Little president, J. T. Greenfield and A. R. Potter vice-presidents, A. W. Beverly secretary and B. R. Farmer treasurer.

Ark., Van Buren.—Reported chartered: The Van Buren Trust Co.; capital \$50,000. Charles A. Pope, president; M. L. McCabe, vice-president; David T. Bryan, secretary and treasurer, and Lewis Bryan are the organizers.

Fla., Ocala.—The Ocala National Bank, capital \$75,000, is reported organized by H. D. Stokes of Ocala, Fla.; J. L. Edwards, C. Camp, C. S. Cullen and E. L. Wartmann.

Ga., Augusta.—The Atlantic States Life Insurance Co. is reported organized with \$200,000 capital stock; directors: President, J. Cary Lamar; first vice-president and general manager, W. S. Cogburn; second vice-president, J. A. Best; third vice-president, R. N. Berrien, cashier Citizens' Bank, Waynesboro; secretary and treasurer, M. C. Dowling, cashier Citizens' Bank, Augusta; medical director, W. W. Battery, Jr., M.D., Augusta; W. A. Slayton, Washington, Ga.; J. C. Evans, cashier Planters and Merchants' Bank, Warrenton; Weems A. Smith, Augusta.

Ga., Macon.—Official: The Hickey-Holmes

[For Additional Financial News, See Page 71.]

Established 1835.
The Merchants National Bank
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 WM. INGLE, Vice-President, and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
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 Hopkins Place, German and Liberty Sts.
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 July 15, 1908, Surplus and Profits, \$671,631.60
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 C. G. MORGAN, Asst. Cashier.
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 Acts as Guarantors, Trustees, Executors, etc.

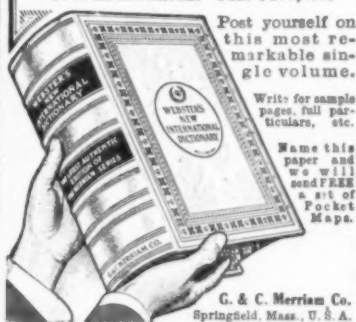
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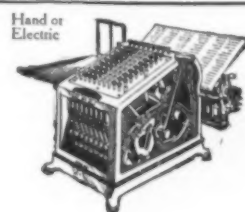
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 Equipped for Cotton Mill Work.

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DIXIE SEAL & STAMP CO.
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 these drives are
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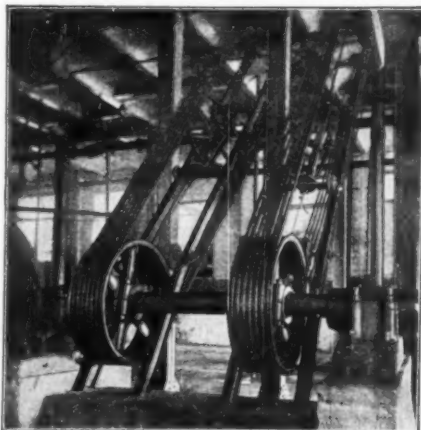
These properties of a rope drive depend to a great extent upon the rope.

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The American Manufacturing Co.
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TRANSMISSION ROPE



Company incorporated; capital \$5000; W. T. Holmes, secretary and treasurer, and T. C. Hickey, president. Business is to begin January 1. The company proposes to do a general real estate, loan, insurance and brokerage business.

Ga., Metter.—The Citizens' Bank of Metter is reported chartered; capital \$25,000; incorporators, Madison Warren, A. J. Bird, Geo. W. Watson, E. Lanier, W. J. Watson, W. L. Jones, all of Metter, and J. M. Dekle of Graymont.

Ga., Thomaston.—The Bank of Thomaston, capital \$25,000, is reported to have opened for business with directors thus: L. F. Farley, president; O. W. Williams, vice-president; E. J. Sprattling, second vice-president; T. E. Mauldin, cashier; W. A. Daniel, W. A. Daniel, C. L. Howell and A. E. Feen.

Ga., Winterville.—Official: The Pittard Banking Co. chartered; capital \$25,000; surplus \$5000, all paid in; directors, J. T. Pittard, president; D. H. Winter, vice-president; I. H. Pittard, F. L. Johnson and W. H. Morton. Business is to begin about January 20.

Ga., Yatesville.—The Planters' Bank of Yatesville is reported to have made application for a charter; incorporators, O. B. Clements, J. T. Lester, J. A. Dozier, W. R. Anderson, J. C. Brown, C. E. Sewell, G. W. Shattles, J. M. Clements, S. Wilson, C. J. McDonald and J. J. Crawford.

Ky., Catlettsburg.—Official: The Catlettsburg Building, Loan and Savings Association incorporated; capital \$100,000. Business will begin January 1, 1911, with T. D. Marcum, president; W. B. Evans, secretary, and Ernest Meek, treasurer.

La., Campti.—A new bank capitalized at \$15,000 is reported being organized with T. K. Giddens as president.

Mo., Seymour.—The People's National Bank is reported being organized with \$25,000 capital by J. C. Peightel of Seymour, Mo.; W. J. Pyatt, E. D. Onstott, R. McMahon and J. A. Kanel.

N. C., Asheville.—Official: The Provident Mutual Life & Accident Insurance Co. of North Carolina has begun business; directors, J. P. Sawyer, chairman; R. S. Howland, J. H. Tucker, Thomas MacLelland, William Farr, Robert J. MacLellan, Alexander W. Chambliss, Erwin Eberman, J. W. Kirksey and Charles G. Lee, secretary.

N. C., Rowland.—Official: The Merchants and Farmers' Bank of Rowland, capital \$25,000, will begin business January 2 with C. T. Tate, president; W. F. Bullock and C. M. Hines, vice-presidents, and A. T. McKellor, cashier.

N. C., Winston-Salem.—Official: The Merchants' National Bank chartered; capital \$100,000; directors, G. W. Maslin, president; Thomas Maslin, vice-president and cashier; Geo. W. Coan, James S. Dunn, J. R. Fletcher, W. H. Maslin, A. E. Hutton and F. S. Verway. Business is to begin January 2.

Okla., Bockito.—Official: The First State Bank chartered; capital \$10,000. Business is to begin between January 5 and 10. Directors: D. G. Wilson, president; H. N. Wilson, cashier; Pink Engel, Green Thompson and R. C. Freaney.

Okla., Rocky.—The State Bank of Rocky is reported being organized with \$10,000 capital by N. E. Medlock, vice-president of the First National Bank of Hobart, and associates.

Okla., Oklahoma City.—The Williams-Doolin Company is reported chartered with \$25,000 capital to do a general farm and loan business; incorporators, John R. Williams and M. E. Williams, both of Hobart, and John Doolin of Alva.

S. C., Bennettsville.—The Union Savings Trust Co. of Bennettsville is reported to have been granted a commission; capital \$25,000; petitioners, W. C. Adams, W. J. Crosland and T. C. McCall.

S. C., Chesterfield.—The People's Bank of Chesterfield is reported chartered with \$25,000 capital; officers, J. B. Streeter, president; Geo. K. Laney, vice-president, and Mack Davis, secretary and treasurer.

Tenn., Lynnville.—The Bank of Lynnville, capital \$30,000, is reported chartered by John W. Fry, J. H. Burrow, W. J. Smith, John W. Alexander, George S. Tate, C. H. Witt, C. T. Reid, George B. Witt, Jonas Brown, R. W. Waldorp, J. R. McCloud.

Tenn., Memphis.—Official: The Ward-Quinn-Workman Company incorporated; capital \$6000. Business began December 1 at 81 and 82 Porter Building, with directors thus: B. A. Ward, president; C. B. Quinn, vice-president; R. A. Workman, secretary-treasurer, and R. L. Bostels and P. B. Carbery.

Tex., Centerville.—Official: The Centerville State Bank of Centerville chartered; capital \$10,000. Business is to begin about February

1 with directors thus: L. T. Gresham, D. A. Sullivan, Joe H. Seale, E. T. Holleman, all of Centerville, and O. Wiley, Jr., Garrett, Tex.

Tex., Dallas.—Reported that Joseph S. Myers and associates propose organizing the Savings Trust Bank.

Tex., Dallas.—The General Bonding & Casualty Insurance Co., paid-in capital \$200,000, with surplus of \$100,000, is reported to have elected officers thus: Robert L. Warren, president; Ed Kneeland of Dallas, vice-president; J. B. Stephenson of Dallas, secretary; J. P. Hatfield of Dallas, treasurer; Dr. Geo. R. Tabor of Dallas, medical director; Thos. L. Camp of Dallas, attorney.

Tex., Krum.—Official: The Farmers and Merchants' State Bank of Krum has been organized to begin business on or about January 1 with J. G. Wilkinson, president, Fort Worth; A. H. Knox, vice-president, and Byron R. Smith, cashier, both of Krum. Through the new bank the two State banks now doing business in that town will liquidate; in a sense it is a consolidation.

Tex., Quanah.—The Citizens' National Bank has been approved; capital \$50,000; organizers, S. P. Britt of Childress, Tex.; E. A. Claesniter, J. J. McAdam, W. R. Edrington and R. F. Hughes. This succeeds the Quanah National Bank.

Tex., Texas City.—First National Bank of Texas City approved; capital \$25,000; incorporators, D. S. Fridner, S. Fridner, A. B. Phillips, W. L. Mody, Jr., and H. E. Borden.

Tex., Winnie.—The Farmers and Merchants' State Bank is reported incorporated with \$10,000 capital by M. E. Wilson, Minneapolis, Minn.; George Webb, Aug. Dezanava and E. W. Lewan of Houston, Tex., and L. R. Miller.

NEW SECURITIES.

Ala., Albertville.—January 16, it is reported, an election is to be held to vote on \$7000 of electric-light plant bonds.

Ala., Montgomery.—City Council is reported to have authorized \$40,000 of paving bonds.

Ark., Fort Smith.—The Mercantile Trust Co. of St. Louis is reported to have purchased \$600,000 of 5 per cent. bridge construction bonds.

Ark., Little Rock.—Bids will be received, it is reported, until 10 A. M. December 28 for \$40,000 of 5 per cent. 1-4-year street-improvement bonds of District No. 163; dated January 2, 1911. Address George W. Donaghy, Frederick Hotzes and L. W. Cherry, Commissioners.

Fla., Brooksville.—An election is to be held January 17 to vote on about \$15,000 of improvement bonds. Fred Stringer is Mayor.

Fla., Fernandina.—Press dispatches state that the sale of the \$49,300 of 6 per cent. certificates of indebtedness has been postponed until January 11. W. Theo. Wass is chairman Board of Commissioners.

Fla., Pensacola.—Official: Bids will be received until noon January 16 for \$250,000 of 4½ per cent. coupon improvement bonds. Address John A. Merritt, chairman Board of Bond Trustees.

Ga., Brooklet (P. O. Statesboro).—Official: S. A. Kean & Co., Chicago, Ill., purchased \$7000 of 6 per cent. school-building bonds; denomination \$700; dated January 1, 1911; maturity, five quadrennial installments of \$1400 each. Address Brannen & Booth, attorneys.

Ga., Kirkwood (P. O. Atlanta).—Robinson-Humphrey Company of Atlanta is reported to have purchased \$60,000 of 5 per cent. bonds at \$625 premium.

Ga., Lagrange.—Official: The \$200,000 of 5 per cent. 20-30-year Troup county road bonds were sold on December 16 to the Lagrange Banking & Trust Co. of Lagrange; it, in turn, sold them to the Robinson-Humphrey Company of Atlanta. The bonds brought a premium netting about 104. W. T. Tuggle is clerk and attorney.

Ga., Macon.—The City Council has decided that the amount of water-works bonds to be voted on March 18 next shall be \$900,000 instead of \$1,000,000.

Ky., Georgetown.—E. H. Rollins of Chicago is reported to have been awarded at \$25 premium and accrued interest \$25,000 of Scott county road and bridge bonds.

La., Crowley.—Official: \$75,000 of 5 per cent. 31-year Sixth Ward and Crowley Drainage District bonds have been sold at private sale; denomination \$500; dated November 1, 1910. L. A. Williams is secretary and treasurer. Crowley, La.

La., Lake Charles.—Lynn H. Dinken of New Orleans is reported to have been awarded \$75,000 of city-hall and \$25,000 of fire-station bonds.

Miss., Brandon.—Official: John A. Gayden will receive bids until January 2 for \$30,000

of 5 per cent. 25-year Rankin county road bonds; denomination \$500; dated February 1, 1911.

Miss., Hattiesburg.—The Supreme Court is reported to have declared valid \$100,000 of bonds of Florence county and Hattiesburg for erection of normal school.

Miss., Jackson.—Bids will be received until January 2 by W. W. Downing, clerk of Hinds county, for \$100,000 of road bonds of District Nos. 1 and 5.

Mo., Clinton.—A dispatch says that the proposed bond issues were defeated December 20, namely, \$60,000 water-works purchase and \$10,000 water and gas plant merger.

Mo., Joplin.—An ordinance is to be introduced in the City Council. It is reported, providing for an election to vote on \$80,000 of viaduct and \$50,000 of sewer bonds.

Mo., St. Joseph.—An official letter says that the city is not issuing bonds, but taking up some of its outstanding bonds. Theo. Shaffer is City Comptroller.

N. C., Durham.—Application is to be made to the General Assembly by the Board of Aldermen, asking that an election be held to vote on \$500,000 of water-works, \$300,000 of sewer extension and \$200,000 of floating indebtedness bonds.

N. C., Winston-Salem.—Press dispatches state that the city is considering the issuing of \$100,000 of refunding bonds.

Okla., Galena.—Press dispatches state that the City Council has passed an ordinance providing for the issuing of twenty internal improvement bonds, amounting to \$7,759.01, to take up the balance of outstanding warrants against the construction cost of subsewer districts A to H, inclusive.

Okla., Lamont.—Official: Owing to error in proceedings, another vote will have to be taken on bonds. W. F. Porter is City Clerk.

Okla., Oklahoma City.—The City Council has authorized the Mayor to call an election within thirty days to vote on \$1,250,000 of water improvement bonds. George B. Saunders is secretary.

Okla., Stillwell.—An official letter confirms report that the Southwestern Engineering Co. of Oklahoma City was the purchaser of the light and water bonds.

Okla., Ada.—Reported voted: Bonds for water-works.

Okla., Heavener.—Bids will be received until 8 P. M. January 4, it is reported, by J. A. Chaney, City Clerk, for \$50,000 of 6 per cent. 25-year water-works bonds.

S. C., Columbia.—W. H. Gibbs, Mayor, writes that in anticipation of authority to be conferred by the Legislature next month, city has sold \$850,000 of 5 per cent. bonds, interest payable semi-annually; \$50,000 to the Carolina National Bank, Columbia, S. C., at 105, and \$800,000 to Townsend Scott & Son, Baltimore, Md., at 103.56. In addition to these premiums, a saving has been effected by making a deal in advance of about \$7000 in interest, advertising, printing, etc.

S. C., Darlington.—Official: Bids will be opened not later than January 16 for \$12,000 of 30-year railroad bonds. Address Mayor and Council.

Tenn., Manchester.—An official letter says that it is proposed to issue \$25,000 of bonds for electric light and water system. E. P. Vaughan is Mayor.

Tex., Aspermont.—Reported that \$7000 of Stonewall county jail bonds have been sold.

Tex., Austin.—The Attorney-General has approved the following securities: \$50,000 of Greenville reservoir bonds; \$5000 of 5 per cent. Como independent school district bonds; \$8000 of Alexander independent school district 5 per cent. 40-year bonds; \$800 of Burnet common school district No. 92 5 per cent. 20-year bonds.

Tex., Beeville.—A Dallas investment company is reported to have purchased \$30,000 of 5 per cent. sewer bonds.

Tex., Brownsville.—The drainage commissioners of Cameron County Drainage District No. 1 are reported to have authorized \$294,500 of bonds for construction of drainage system. County Commissioners have already authorized the issue.

Tex., Garrison.—Official: Bids will be opened February 1 for \$10,000 of 5 per cent. 30-year school building bonds; denomination \$1000; dated February 1, 1911. Address Don McDuffin, president, school commissioners.

Tex., Corpus Christi.—Reported that a bond election is to be called to vote bonds for wharf and warehouse.

Tex., Greenville.—Reported voted: \$50,000 of water-works bonds. Spitzer & Co. of Toledo, O., is said to have purchased them at \$100 premium and accrued interest.

Tex., Hearne.—Reported voted: Bonds for water-works.

Tex., Lockhart.—Reported voted: \$35,000 of 5 per cent. 10-40-year bonds of Road District No. 2, Caldwell county.

Tex., Martindale.—Reported voted: \$25,000 of road bonds.

Tex., Palestine.—Reported that bonds for water-works are to be voted.

Tex., Pecos.—Official: Election to vote on \$25,000 of sewer bonds postponed until January 30. S. M. Prewitt is mayor.

Tex., Quanah.—An official letter confirms report that bids will be opened January 1, 1911, for \$15,000 of 5 per cent. 40-year Quanah independent school district bonds. Address J. R. Polndexter, president Board of Education.

Tex., Sinton.—A letter to the Manufacturers Record says that there will be a \$100,000 issue for the purpose of building roads in San Patricio county. The Attorney-General has not yet approved the bonds, but the issue will likely be perfected after February next.

Tex., Stamford.—Official: Bids will be received until January 1 by W. C. Blanchett, Mayor, for \$10,000 of 5 per cent. 40-year street-improvement bonds. Denomination, \$1000. Dated October, 1910.

Tex., Sulphur Springs.—Reported that \$1500 of Dyke School District building bonds were voted.

Tex., Winters.—D. E. Bartlett, secretary, is receiving bids for \$15,000 of 5 per cent. 5-40-year school bonds.

Va., Chase City.—Official: Bids will be opened at 7:30 P. M. February 6 for \$15,000 of 6 per cent. 20-year improvement bonds; denomination \$500; dated January 1, 1904. Address W. J. Gregory, clerk of Council.

W. Va., Parkersburg.—Press dispatches state that it is proposed to issue \$175,000 to \$190,000 of 4½ per cent. 20-30-year bonds for road improvements in Parkersburg District, Wood county.

At Chase City, Va., bids will be opened at 7:30 P. M. February 6 for \$15,000 of 6 per cent. 20-year improvement bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The First State Bank is reported to have consolidated with the Dawson National Bank of Dawson, Ga.

The Chestertown Bank of Maryland at Chestertown will, according to press reports, increase its capital from \$25,000 to \$30,000.

The Taneytown Savings Bank of Taneytown, Md., will, it is reported, increase its capital from \$13,000 to \$25,000.

The Johnston County State Bank of Millburn, Okla., is reported to have increased its capital from \$15,000 to \$25,000.

The Georgia Railroad Bank of Augusta, Ga., has, according to press dispatches, decided to increase its capital from \$200,000 to \$400,000.

The Burton State Bank of Burton, Tex., proposes, it is stated, to increase its capital from \$10,000 to \$20,000.

The Corpus Christi National Bank of Corpus Christi, Tex., according to press dispatches, will increase its capital from \$100,000 to \$200,000.

The Virginia Banking Co. of Roanoke, Va., is reported to have increased its capital from \$15,000 to \$25,000.

The conversion of the First State Bank of Crosbyton, Tex., into the First National Bank of Crosbyton has been approved; capital \$50,000.

The Bank of Canton at Canton, Ga., is reported to have increased its capital from \$75,000 to \$100,000.

The Boswell State Bank and the Boswell National Bank, both of Boswell, Okla., are reported to have consolidated under the name of the former institution. Capital, \$15,000.

The American National Bank of Asheville, N. C., announces that L. L. Jenkins has been elected president, to succeed John H. Carter, resigned.

VIRGINIA-CAROLINA CHEMICAL CO., Office of Treasurer.

Richmond, Va., December 13, 1910.

PREFERRED DIVIDEND NO. 61.

The Board of Directors of this Company have this day declared a dividend of two (2) per cent., the same being consecutive quarterly dividend No. 61 on the preferred stock of this company, payable JANUARY 16, 1911, when dividend checks will be mailed to all preferred stockholders of record at the close of business December 31, 1910. The books for the transfer of preferred stock will be closed from 12 M. Saturday, December 31, 1910, until 10 A. M. Monday, January 16, 1911.

S. W. TRAVERS, Treasurer.

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